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STATE BOARD OF HEALTH OF FLORIDA

TWENTY-FIFTH

ANNUAL REPORT

of the

STATE BOARD OF HEALTH
OF FLORIDA

1913

APPROVED BY THE BOARD IN ANNUAL SESSION
MARCH 5-6, 1914

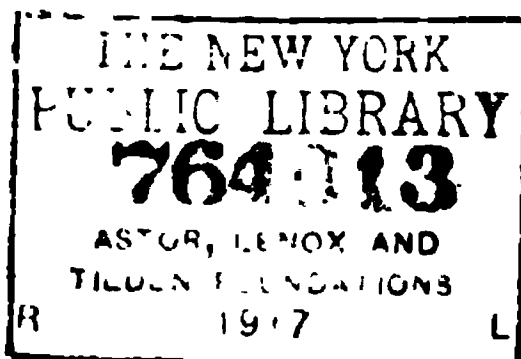
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STATE OF FLORIDA

STATE BOARD OF HEALTH

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Secretary and State Health Officer.

EXECUTIVE OFFICE AND CENTRAL LABORATORY:
State Board of Health Building,
Springfield Boulevard,
Jacksonville.

BRANCH LABORATORIES:
State Board of Health Building,
Florida Avenue and Constant Street,
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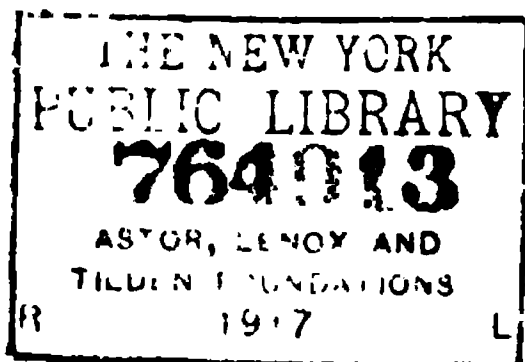
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Dr. Joseph Y. Porter,

State Health Officer of Florida

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LETTER OF TRANSMITTAL.

PALATKA, FLA., MARCH 5, 1914

HONORABLE PARK TRAMMELL,
Governor of Florida, Tallahassee, Fla.

DEAR SIR:—

The statutes of the State of Florida require that the President of the State Board of Health shall each year certify to the Governor the expenditures of the Board, and forward such recommendations as the Board may think needful to preserve the health of the people; which the Governor may then, in his discretion and wisdom, transmit to the Legislature for its consideration. The Board accepts and approves the report of Dr. Porter, State Health Officer, and commends same to your earnest attention.

As the details of the management of the affairs of the State Board of Health are by law placed under the direct supervision of the State Health Officer, and as he has very amply covered the general subject of health management for the past year in his annual report, I herewith transmit to you a copy of same, inviting your careful reading of what has been accomplished or sought to be accomplished for the betterment of the health conditions in the State. While almost every phase of the management has been dealt with by the State Health Officer and his assistants in the various reports submitted, yet in connection with certain comments which the State Health Officer makes on some much needed modification of the present law, I wish to emphasize what he has stated on these subjects, and to invite your attention to a much desired amendment to the statute requiring the care by the State Board of Health of domestic animals, and more particularly to the provision that animals affected with glanders shall be appraised, destroyed and paid for by the State. It occurs to me, as the State Health Officer has clearly pointed out, not only in his report for 1913, but for previous years, that it is unfair to the tax payers of the State that an accident of this kind, such as disease

happening among stock, should have to be borne by the entire citizenship, and he very reasonably says that the citrus growers and others interested in agricultural and commercial development of the State, could equally with equity demand payment for loss occurring through destruction of groves by parasitic life, or by visitation of climatological changes. I think, therefore, that, if the present law was amended or a separate enactment passed by the Legislature prohibiting stock entering the State without being certified to by competent federal or state authorities elsewhere, as being free from disease, the practice of dishonest stock dealers to buy tainted animals elsewhere and import them into Florida to be sold at a low price, would be barred, and the practice would be stopped, and the occurrence of glanders in the State would be rare and seldom found.

I would also suggest to you, and recommend strongly, that the present statute requiring that hog cholera serum shall be furnished free to the farmers of the State, be likewise amended to read that it be given at cost price, either as manufactured or as purchased by the State Board of Health. Florida and Illinois are the only two states in the union where this serum is furnished free to the agricultural interests; and there seems to be, to my mind, and also expressed by the full Board, no good reason why the owners of swine herds should not defray the cost of keeping their stock healthy, as they reap the benefit of same.

In this connection I wish to say further, that I do not believe the statute of 1911 authorizing the State Board of Health to assist in the eradication of Texas fever in Florida, contemplates more than the Board assisting in an educational promulgation or dissemination of information, an acceptance of which would insure relief to the cattle raising industry of the State. Most certainly, if the construction of vats and the dipping of cattle will improve the quality and weight of animals, the expense of same should be borne by those who reap the benefit, and not by the entire tax-paying citizenship. If there is ambiguity of construction in the present law in the opinion of the State Board of Health, it is essential that it should be corrected.

I voice the opinion of the other members of the Board when I say that the Board is not only perfectly willing but exceedingly

anxious to promote and advance the health of not only the people of the State, but every industry which the people are directly or indirectly interested in, but the Board feels that, to spend money in the direction of one or two certain industries and not to do so in other directions, would be a discrimination for which they could be justly criticized, and, furthermore, would not be legal.

I am glad to say that the health of the people of the State has been generally good in the past year, and while certain diseases occurring could have been prevented had the people heeded the advice and counsel which the Board freely gave on all subjects concerning public health, by bulletins, pamphlets and other literature, yet it is felt that much improvement has resulted from this educational propaganda, and increasing interest is shown year by year in health matters, which must ultimately result, as the people become better informed and ignorance on the subject is lessened, in a physically improved citizenship.

Very respectfully,

F. J. FEARNSIDE,

President of the State Board of Health.

**EXECUTIVE DEPARTMENT
STATE BOARD OF HEALTH OF FLORIDA**

**REPORT OF THE
STATE HEALTH OFFICER
DR. JOSEPH Y. PORTER**

REPORT OF THE STATE HEALTH OFFICER

To the President and Members of the State Board of Health:

In order that a clear understanding and thorough conception of the value and importance of the work of the executive office of the State Board of Health for the past year (1913), may be had by the people of Florida, I herewith transmit to you a concise account of the transactions of my office for the year 1913, with the hope that what has been attempted for the welfare of the State, and what has been accomplished in this respect, may meet with your approval.

It is gratifying to note the growing interest in health matters which is apparent by increasing activity in this direction all over the State for the past several years. There seems to have been an awakening on the part of the citizens of Florida, to the necessity of "doing something" which will lessen sickness and potently assist the working capacity of the individual. It is appreciated that illness, however slight, decreases the vital ability to accumulate this world's goods, and that health is the greatest asset in the commercial upbuilding of a community or State. It is now recognized, even by those who give but little thought to the subject, that an indifference to certain conditions of living, when allowed to run rampant, invariably brings disaster to a community, but that the progressive citizen and wide-awake community who heeds advice from the health authorities and accepts and acts upon the recommendations, which are always generously given, invariably profits thereby. There is no surer index of this "progressive spirit" than is shown by the general healthful conditions of the State during 1913. While it may appear as a stereotyped phrase to say that "the health of the State for the past year has been excellent," and may be a rather vague assertion when unsupported by statistical figures, yet from correspondence, gathered from different sections and from laboratory reports, it can be stated, I think, without fear of captious contradiction, that the year 1913 has shown a marked

increase in health conditions and an improvement in sanitary advancement, which promises to be not only lasting, but still further becoming better and better. It has been so frequently stated in these reports and in other writings from this office that, after all, the public health is a question alone of individual responsibility, that the saying has become a maxim and adage of the office, for it is recognized that by impressing the individual with this truth, for it is a truth, that with a co-operation established between him and those agents which improve health and lessen sickness, very soon will the whole community be helpers in the work, and somewhat of the cherished anticipation of the sanitarian, become facts.

As Governments are but the aggregation of individual units, it is apparent that the individual must play the important part in its administration, and especially in health conservation. No man liveth unto himself, for in living, by his acts, he establishes an environment which may either be of benefit or detriment to his neighbor. It is indeed gratifying to be able to say to you that there has been less sickness in the State during the past year than for previous years, and that of the special diseases which tend to decrease the working force of the State, such as malaria and typhoid, reports from the several laboratories of the Board all show that there has been a marked lessening of positive specimens sent in for examination and determination, than in former years. The total number of specimens received for examination has been larger and is increasing each year, thus showing an appreciation by the physicians of the State for information which will assist them in a positive and speedy deciding of doubtful cases of sickness. The ratio of positives to the number of specimens examined, however, does show a decrease of positive cases of malaria and typhoid mailed for examination.

Unfortunately, this cannot be said for tuberculosis or for diphtheria. The laboratory records show that there has been a corresponding increase in "positives" for both of these diseases to the ratio of specimens of each disease submitted for examination. Just why diphtheria should have increased in the State during the year, it is impossible to say or to ascribe the cause. It may be that by obtaining fuller records more cases of diphtheria have been learned of, and that in reality no more have occurred, during

the past year, than at other previous seasons, with the possible exception of the outbreak at DeFuniak, which outbreak considerably increased the number of cases brought to the attention of the State Health authorities.

With the migration of consumptives, pulmonary-tuberculosis, from the rigors of a Northern climate to the balmy temperature of this State, the most southern of the United States' continental possessions, it is an extremely difficult matter to accurately ascribe the discrepancy in number of cases from year to year; nor is it thought to be possible that such could be had.

More is learned of the existence of this trouble in the State than formerly, for more specimens are submitted, by physicians and laymen, and a greater dependence is had upon the laboratories of the Board to aid in a well defined diagnosis. And this same statement may well apply to other of the communicable diseases, which the microscope greatly assists the doctors in determining. The reports of the laboratories which are appended and made a part of this recital of events as transpiring during the year, deal with this and other problems connected with communicable disease distribution throughout the State, and will be found to be both interesting and instructive.

It is a deplorable fact, and one much to be regretted, that Florida has not a system of vital statistics which can be made useful in obtaining definite knowledge of the life movement of her people, or which can be used to benefit the State commercially. The failure to have these statistics is in no wise due to an indifference or apathy of the Executive Officer of the Board, or to a lack of persistent effort on his part to obtain this useful and beneficial information, which is necessary to place the State of Florida within the registration area of States in the Census Bureau of the United States Government.

It has frequently been indicated in these reports, and in fact, each year the subject has been brought up and dwelt upon, even from the inception of the Board, now some twenty-five years ago, that until an accurate collection and tabulation could be had of the births and deaths occurring in the State, nothing could be known or learned of the life wave of the people, and that desultory reports,

haphazardly made, were worse than useless, and if published would be misleading and untruthful. In 1899 the Legislature at the instance, and earnest pleading of the State Board of Health, provided for a Bureau of Vital Statistics, with the State Health Officer as Registrar of the same, and authorized the needful machinery to carry into effect the requirements of the Act. Immediately the State Health Officer set about to fulfill the mandate of the law, with an enthusiastic and determined purpose to perfect a system of vital statistics for Florida which would be a credit to the Commonwealth. Plan after plan was devised and tried out, but to no purpose or successful accomplishment. Postal cards addressed to the Board, and an enumeration of diseases, from which deaths were likely to occur, on the reverse side of the card, were mailed to the seven hundred or more physicians known to be, at that time, in the State; and similar cards for births were also printed and distributed. Notwithstanding the fact that through the efforts of the Board the Legislature for several years withheld the State occupation license tax for physicians, yet the majority of the doctors in the State could not be influenced either by appeals to patriotism or State pride to make full returns of the births and deaths occurring under their professional care; and this plan failed. As the demand upon the time of the doctor was slight—for he had only to enter the data on the card and drop it in the postoffice—the idea of remuneration was not considered because of the action of the State in excluding the doctor from the occupation license tax; still, a nominal remuneration of ten cents per name was offered, but not in any wise as a compensation for either time or trouble.

One scheme after another was tried and persisted in, in an attempt to obtain these needed vital statistics, which at that time, it was logically thought could only be accurately gotten through the medical practitioners engaged in the active work of their profession. The Act of the Legislature made it obligatory upon all—whether medical men or not—under whose observation a birth or death came, to make these reports; and, of course, as in all laws of this character, there was a penalty attached to a failure to obey the enactment.

It was repugnant, however, to the State Health Officer, in the first place, to hale any of his professional brethren before a court of law for a failure to fulfill what should be a civic duty, and in

the second place, it would have been exceedingly difficult to obtain evidence that individual practitioners did not report all births and deaths occurring in their practice, without the detective assistance of a corps of inspectors who would travel the State for the purpose of ferreting out the failures; which was not a practical thing to do. Therefore, for several years now the gathering of vital statistics for Florida, other than what has been furnished by the Census Bureau in the decennial tabulation of that branch of the Government, has been dormant, because outside of two cities of the State, nothing sufficiently accurate in this direction could be published without inviting a challenge from statisticians elsewhere who might be studying the subject for comparative investigation and tabulation with other portions or sections of the United States. Key West and Jacksonville were the only two cities in Florida whose vital statistics were considered to be sufficiently accurate by the Census Bureau of the United States to be included in the registration area of cities of the United States.

The vital statistics of Key West was commenced and has been accurately followed since 1874, and those of Jacksonville since the reorganization of the Health Department of this city under the present Health Officer, Dr. C. E. Terry. Recently the subject of vital statistics collection for the State has been revived, and under the authority of the Board another effort is being attempted to procure this needful information; information which has been decidedly wanted by life insurance and immigration companies, whose efforts to promote the development of the State have been seriously hampered by the lack of this data.

In July of this year, circulars were sent to the cities of the State, having a population of 2,000 and over, asking their co-operation in acquiring a record of births and deaths occurring within their municipalities. They were asked to appoint a Registrar of Vital Statistics for the city, who would then receive an appointment from the State Board of Health, and be paid twenty-five cents for each birth and death reported to the Executive Officer, provided such returns came within ninety per cent. of accuracy; this accuracy to be determined by the Census Bureau of the General Government in the division of vital statistics of the Bureau of Commerce and Labor. Twenty-eight cities and towns have favorably replied and accepted the proposition, and the scheme is now being worked out;

but as the subject is an educational one, at least a year will be required to perfect a system which will be trustworthy, and probably it will not be before 1915 that any exact statement can be made of the birth and death rate of these municipalities. In the meantime there will also be an effort made to awaken a desire in the rural settlements to come into the registration area of the State, and so, by degrees, it is hoped that the earnest expectation of the past twenty-five years may become a realized fact, and Florida, progressive in all other respects as regards health management and conditions, may come into her own in being able to state with fact and figures what has always been believed—but only in a general way asserted—to be the healthiest State in the Union of States.

The injury to the State which arises from a defective enumeration of causes of deaths, which is comprised in the subject of vital statistics, is shown in the exclusion by some insurance companies of certain counties in the State, and instructions to their agents to place them—especially the southern counties—in the “interdicted district.” Information has been sought of this office, and is still being daily asked for, concerning the death rate of the State, and more particularly in those portions which, as before stated, some life insurance companies would carry their business into were well defined statistics available. This interdiction is both unreasonable and unjust to localities, because a long experience and a thorough cognizance of health conditions existing over the entire State, covering a period of twenty-five years, has satisfied and proven to the State Health Officer that there is not a section of Florida in which life insurance cannot be safely placed, and to the advantage of the insurance company as well as the insured; but it can be well understood, however, that the acturaries of these companies hesitate to authorize business where no statistical figures of mortality are available or have not been made public. It is apparent, therefore, that it is highly desirable that the stigma of implied unhealthfulness shall be put an end to as soon as possible; and only by published statements supported by figures can this doubt be removed. In a recent press bulletin it was well remarked: “If, as is the case of our own State, misrepresentations of disease areas have been made, vital statistics furnishes the only method of successfully contradicting these misleading and damaging rumors. If it did nothing toward the material welfare of Florida, other than furnish figures

proving that our morbidity and mortality rate is far below the prevalent idea among people who are not acquainted with the facts, it would be worth millions of dollars. But vital statistics does much more than this. It directs the energies of the Board of Health, by showing where the weak places are—where the supervision of the Board is most needed to correct errors of sanitation; it 'legalizes' the birth of every child in the State; it prevents to a far greater extent than a superficial consideration of the subject would seem to indicate, certain crimes; and lastly, it puts Florida in line with practically the whole United States, as well as the more enlightened European nations, who have recognized the tremendous importance, and are now rigidly enforcing the accurate collection of such statistics."

There is still another potent reason why the State should put forth information of this character: Scarcely a day passes or a mail is received that the State Board is not asked concerning the health of this or that section of the State, or whether certain portions do not offer an advantage over another as a residence for certain ailments and physical troubles. Of course the latter requests partake more of information respecting morbidity statistics, than for mortality, for an unhealthful locality is not necessarily one of the greatest mortality, but the two subjects of morbidity and mortality blend so imperceptibly one into the other that a report of health conditions in any community or State is scarcely complete and of value unless it can be stated along with the number of births and deaths, the prevalent causes of sickness in the neighborhood.

Considerable space was devoted in the 1912 annual report of the State Health Officer to the subject of mortality statistics and their importance, which it is hardly necessary now to repeat, although the importance is in no wise lessened by the lapse of a year.

The future of the work judging by the experience of other states as well as from the past in this, shows the need of uniformity, in the end by a state law as I recommended in the annual report for 1904, but at this time by similar ordinances in each of the cities. And here I would say that this uniformity, so much urged by the medical and statistical associations and the United States Census Bureau, and embodied in the model laws for the reporting of births and deaths and of sickness, recommended for

adoption, should be at the basis of the health work of this State, and should be prescribed by statute, so the city and other local health authorities and their regulations will be uniformly co-ordinate with the workings of the State Board of Health.

In view of the past experience with physicians and their disinclination to report deaths, it will, I believe, be necessary that future regulations for such reports place the burden upon the undertakers by requiring a burial permit for the disposition of all human bodies, and that no permit shall be given except upon the filing of a death certificate. This was one of the rules and regulations adopted in 1904, but was not generally enforced. It should now be a part of the ordinance of each city, and should eventually become a state law.

There seems to be no way to enforce necessity of birth registration except by the imposition of the penalties imposed now by city ordinances, and which will hereafter have to be provided by the Legislature in the amended statute suggested, and from the experience in this State while showing leniency towards physicians and the changing attitude of many other states, it seems that in the future to acquire this information, violators should be treated alike and prosecuted without regard to position; but it is sincerely hoped that such extremity may never have to be employed against a Florida doctor.

The favorable sentiment of the public is the ultimate basis upon which the success of this, as well as all progressive movements for the peoples' betterment depends; therefore, a campaign of education with adequate financial support should be waged throughout the State to show the need and uses of vital statistics. The press should be given matter to publish, and asked to urge its readers to see that necessary legislation is enacted, and when enacted, vigorously enforced. Physicians, midwives and all interested, should be sent circulars and pamphlets descriptive of the system and its practice, and "Health Notes" should have a special section devoted to it, with articles and tabulations of reports.

There should be installed proper filing and indexing systems and appliances in accordance with the best modern usages, so the original records may be kept safe from the possibility of destruction by fire or loss by theft or accident, and that they may be readily referred to when inquiries are made and tabulations are compiled.

And there should be sufficient clerical and other help at the disposition of this department to assure the prompt disposal of current details and accurate and full tabulations of reports.

The report of the Statistician of the Board recites some interesting facts connected with the effort of the Board to awaken an interest in this work and describes the progress made.

ADMINISTRATION BUILDINGS AND GROUNDS

During the early part of the year, the concrete steps leading to the porch of the administration building sank as a result of a pile giving away. Owing to the nature of the ground, prior to the erection of the building, a portion of the cement floor in the basement also sank to some extent. Both of these defects were corrected at an expenditure of \$1,000.00.

The building proper never was in any danger of settling, notwithstanding a misleading newspaper article, which criticised unfavorably the construction of the building.

A new refrigerating plant has also been installed in the building to meet the increased needs of the laboratory.

The work of grading the grounds has been completed, and there now remains only a slight amount of work to be done to make the location exceedingly attractive; such as bulkheading Hogan's Creek, putting in a cement roadway, laying the street and sidewalk curb, and setting out shade trees and shrubbery.

SANITARY DISTRICTS OF THE STATE.

In the last annual report mention was made of certain features of the work of the Board which it was thought could be improved upon by separating and placing in charge of assistants, the several sections, who, acting by authority received from the State Health Officer, will direct the management and report directly to him. Realizing the importance of keeping in close touch with the public so as to study and improve health conditions in every part of the State, it was decided by the Board to extend the force of assistants, and to divide the State into sanitary districts, each district to be under the supervision of an appointee to be known as an Assistant to the State Health Officer. The area of these dis-

tricts was based, in a great measure, upon railroad facilities and the quickness and convenience of travel between points. The State was accordingly divided into seven districts having, as nearly as possible, equal population. At the centers of population of each of these divisions, a branch office of the State Board of Health was established with one of the Assistants in charge. In addition to this, at the reorganization of the Board in June, the Board appointed three physicians as Assistants to the State Health Officer, basing the selection upon recommendations as to their thorough familiarity with health conditions in their respective localities, and considering also, the reported active interest and excellent records in public health work of the State, which they were said to have. The State was divided, as stated, into seven districts, with Dr. Charles William Bartlett, with headquarters at Tampa, in the Southwestern District, comprising the counties of Hillsborough, Polk, Pinellas, Manatee, DeSoto and Lee; Dr. C. W. D'Alemberte, with headquarters at Pensacola, in charge of the Western District, comprising the counties of Escambia, Calhoun, Santa Rosa, Walton, Holmes, Jackson, Bay, and Washington; Dr. Joseph Y. Porter, Jr., with headquarters at Key West, in charge of the South Tropic District, comprising the county of Monroe. In the early part of 1913 two field assistants of the State Health Officer, Drs. C. T. Young and E. W. Diggett, resigned from the service of the Board. This was greatly regretted, but as it was represented that they would prefer private practice, their resignations were accepted with the good wishes of the State Health Officer for their future success in the new line of professional work. These resignations left the State Health Officer with but one field assistant, Dr. W. P. Crigler. Dr. Crigler, under the new regime, has been assigned to the division known as the South Central District, with headquarters at Ocala, comprising the counties of Marion, Citrus, Hernando, Pasco, Sumter, Lake, Seminole, Orange and Osceola. With the redistricting of the State this left three vacancies to be filled. Invitations for competitive examinations having been issued, six applicants for these positions appeared, with the result that three were successful: Doctors Joseph E. Taylor, of Augusta, Ga., Maurice E. Heck, of Jacksonville, and Clarence H. Dobbs, of Atlanta, Ga. Dr. Taylor was subsequently assigned to the division known as the West Central District, with headquarters at Tallahassee, and comprising the

counties of Gadsden, Liberty, Franklin, Wakulla, Leon, Jefferson, Madison, Taylor, LaFayette; Dr. Heck to the division known as the East Coast District, with headquarters at St. Augustine, comprising the counties of Duval, Clay, St. John, Putnam, Volusia, Brevard, St. Lucie, and Palm Beach; Dr. Dobbs to the division known as the Central District, with headquarters at Gainesville, comprising the counties of Hamilton, Suwannee, Columbia, Baker, Bradford, Alachua, Levy. Each of the Assistants to the State Health Officer will make three regular tours of inspection over their respective districts yearly, submitting report of each trip to the State Health Officer. In addition to this, they are expected to respond to calls to any part of their territory, both when requested directly or directed through the executive office at Jacksonville. It is their duty to constantly study their territory, communicating to the executive office supposed nuisances; to make recommendations; to promote public health administration in municipalities; to co-operate with the executive office in establishing vital statistics in the qualified cities; to suppress and control disease, relying mainly on prophylactic measures; to keep the executive office constantly informed of health conditions and sanitary work in their respective districts; to co-operate with the physicians of their territory, and gain their confidence; to keep abreast of all medical subjects; to submit at the close of each year a complete and detailed statement of the work for the year.

On August 1st of this year, Dr. Hiram Byrd, who had for eight years served the Board as Chief and Office Assistant of the State Health Officer, resigned the position to engage in the field of medical specialism. Dr. Byrd entered the Health Service of the State by competitive examination in 1903, and with an interruption of work of about six months, was constant in his devotion to the health interests of the State, to the date of his resignation. An entertaining speaker and a forcible and interesting teacher, he contributed both in the lecture room and by writings, valuable help in upbuilding the health welfare of the people, as well as popularizing sanitary methods of reform which the State Board of Health is assiduously endeavoring to impress upon the people. The State Health Officer wishes to acknowledge the assistance which he rendered and to commend his work, and likewise to wish him success in any enterprise in which he may engage in the future.

COMMUNICABLE DISEASES.

Until the ideals of living are attained the human organization will be susceptible to illnesses and will be prone to disease. Health boards and sanitary councils can but point out the way and direct how this desired fulfillment can be gotten. They are advisors of the people in this respect, but it is the people themselves who must, by co-operation with these health bodies, ultimately perfect the plans outlined and suggested.

Here again comes in the question of personal and individual responsibility, a theme which has been so frequently dwelt upon and, it is hoped, impressively set forth, in the writings from this office. In the table of communicable diseases, which are at the same time preventable, is enumerated four of the principal maladies of this character with which the Executive Office of the Board has been called upon to deal, either in preventing or suppressing outbreaks of, during the past year: Diphtheria, typhoid fever, smallpox and hydrophobia. The local occurrences, together with the number of cases, are so plainly tabulated that at a glance can be seen where happening.

DIPHTHERIA.

The effectiveness of the Board's policy in the management of diphtheria was again clearly demonstrated in the control of this disease during the past year. As a result "quarantine" must become a thing of the past, and antitoxin, in curative and immunizing doses, and isolation, accepted as the correct course to follow in the control and suppression of diphtheria.

Diphtheria has occurred in epidemic form in several localities, chief of which was the outbreak in DeFuniak Springs. (See report of Dr. J. E. Taylor, Assistant to the State Health Officer.) In the absence of the writer at Havana, owing to danger of introduction of yellow fever, Dr. S. R. Mallory Kennedy, Member of the Board from Pensacola, visited Marianna, Chipley, Ponce de Leon, Bonifay and Caryville, on account of the uneasiness which was felt in these towns, because of nearness to DeFuniak; and also assisted in the epidemic at DeFuniak Springs. The object of this visit to the first named points was to take the situation in

hand; to assure the authorities of the Board's control of the situation; that quarantine was unnecessary, ineffective and forbidden by law, unless authorized by the State Board of Health, and that the disease should be controlled by the liberal use of antitoxin.

In Gainesville, diphtheria was persistently reported during August and September, but did not result in an epidemic owing to the efficient health administration at that point.

A number of diphtheria cases was reported from Lakeland on August 30th; the disease, however, was immediately controlled. So, too, were the cases in the Florida State College for Women at Tallahassee during November, speedily checked. Quite a number of cases of diphtheria were reported in Jacksonville during October and November.

Various other points reporting diphtheria were visited during the year, in each of which it was possible to prevent its spread by the co-operation of the physicians.

Although some misunderstandings have occurred, as to the procedure adopted by the Board for the distribution of diphtheria and tetanus antitoxin to the indigent through the druggists of the State, the scheme is now better understood. During 1913 there were, in this way, 122 indigent patients supplied with and relieved by, diphtheria antitoxin, and six by tetanus antitoxin. In this plan the question of profit is eliminated both by the druggists and the manufacturers in the humane work of furnishing relief to the poor of the State.

As a whole, the management of diphtheria during 1913 has been satisfactory. A table elsewhere shows the distribution of diphtheria as diagnosed by the laboratories of the State Board of Health.

SMALLPOX.

Since the "high-water mark" of 1911, smallpox has been on the decline in the State. In 1911 there were 3,155 cases; in 1912, 1,713 cases were reported; in 1913, it will be seen the number of cases reported dropped to 1,166. Unfortunately, with the drop in the number of cases of smallpox, the number of vaccinations has also dropped, for there is no law making vaccination compulsory in Florida. It holds true that when smallpox is most prevalent, vac-

cination is relatively in demand. In Escambia County, it will be noticed that vaccination was much in demand during the epidemic of smallpox the early part of the year. During March a young white man died from hemorrhagic smallpox in Ocala. Although there were but two cases of smallpox reported in Marion County during that month, the requests for vaccine jumped from none in January and thirty points in February, to 1,290 in the month of March. This demand also held good in other portions of the State where deaths occurred from smallpox.

From this it would seem that, when it comes to a "show-down," all the patient teaching and urging of the State Board of Health for vaccination against smallpox has not been lost, and that these people, like all who let the welfare of their soul and body go astray, seek salvation at the last moment. In 1911 the number of vaccinations was 59,150; in 1912 it decreased to 42,453; in 1913 vaccinations made amounted to 20,398, or less than half for 1912, and about a third of the number done in 1911.

By the plate elsewhere, it will be seen that smallpox occurrence comes in tides. In 1896 the tide was very low, but a little over a hundred cases* being reported in the State. In 1900 the number of reported cases reached approximately three thousand. The number of vaccinations also increased, with the result that the next year smallpox dropped to 1,100 cases, and in 1902 to less than three hundred. In 1905 the number of cases increased to 1,200, but with nearly fifty thousand vaccinations dropped to less than a hundred in 1909. In 1910 smallpox was again on the increase, and in 1911, eleven years from the date of the epidemic of 1900, reached the highest point yet recorded in Florida for one year, 3,155 cases being reported. With some 125,000 vaccinations done since then, smallpox is again on the decrease. It is not actually known how long a successful "take" in vaccination will hold good; often times during a whole life-time, but unless people will awaken to their personal responsibility in the matter of vaccinating against this disease, it may confidently be expected that seven or eight years hence the State will again see a decided recurrence, with resultant great expense and suffering.

*NOTE.—The number of cases of smallpox reported is estimated to be about one half of the cases actually existing.

MALARIA.

Malaria was mostly prevalent during the late summer and early fall, or about the end of the "rainy season." With thirty cases determined in the laboratories for January, the maximum was reached in September, with sixty-five cases, but again dropped with cold weather and frost, to thirty-two cases for November and sixteen in December.

A table showing the distribution of malaria as determined by the laboratories of the State Board of Health, and a curve showing the seasonal prevalence of malaria with reports on prevalence of mosquitoes, and climatology, will be found elsewhere.

On the whole, however, malaria is on the decrease. Dr. Hanson, Senior Bacteriologist of the Board, says there were fewer cases reported this year in his division than last. From various parts of the State, physicians report a decrease in cases. Some are at a loss to account for the decrease, but the more observant claim that screens and the use of mosquito nets, and a larger number of protected porches, seem more in evidence than ever before, and venture the opinion that perhaps this is the reason for the drop.

Screening has been a constant note of appeal by the State Board of Health to the people of Florida, for many years, and it is indeed gratifying to note the decrease of malaria in the State as a probable result of this advice.

TYPHOID FEVER.

Inattention to the vital but simple matter of screening the kitchen and dining room against flies has again claimed the usual toll of sickness and death from typhoid fever. Infection from water supply has been proven unlikely, bacteriological examinations of over two hundred and fifty specimens of water, taken throughout the State, having resulted in but one being found with any evidence of sewage contamination; and that occurred many years ago and was promptly remedied. In the fight against this disease, State-wide laws and ordinances have been enacted. Chapter 6195 of the Laws of Florida, 1911, makes it a misdemeanor to operate any hotel, boarding house or restaurant within the State without

keeping all doors, windows, and other openings in dining rooms and kitchens, or passageways leading thereto, effectively screened. Rule 43 of the Rules and Regulations of the State Board of Health makes it unlawful to keep or maintain horses or mules within five hundred feet of any residence or store in the incorporated towns of the State, except under such conditions as shall effectively prevent the breeding and liberating of flies. This legislation was sought for the purpose of checking the spread of typhoid fever, by screening against and reducing breeding places of flies.

Several cities in the State have passed ordinances making compulsory the fly proofing of all surface closets, and the State Board of Health is working for ordinances of this kind in the other cities. However, during the past year, the fight against typhoid has been conducted mainly through education. The press service of the Board has contained many articles, written in a popular and comprehensive way, which pointed out how typhoid is transmitted by the housefly, and that, to avoid typhoid fever, screening is the most effective measure. In addition, Dr. S. R. Mallory Kennedy, a member of the State Board of Health residing in Pensacola, has contributed valuable educational articles on typhoid fever to the press of the State. At the June meeting of the Board, Rule 1, Reportable Diseases, was amended to include typhoid. Several typhoid outbreaks (and by outbreaks is meant several cases) have occurred during the year. During the month of February typhoid fever was reported from Fort Pierce, St. Lucie County; Bushnell, Sumter County; Wauchula, DeSoto County; and Tallahassee, Leon County. Many anti-typhoid vaccinations were made in these localities at that time, the Board furnishing free this preventive vaccine to the indigent. Tallahassee reported ten cases, the source of infection being traced to flies, which were unusually prevalent in the city at that time. The disease abated after all surface closets were thoroughly cleaned and disinfected to prevent the transmission of the typhoid bacilli by flies, and over one hundred anti-typhoid vaccinations were made. In the village of Holt, Santa Rosa County, typhoid fever appeared in early July. Dr. D'Alemberte, Assistant to the State Health Officer, with headquarters in Pensacola, investigated and found that ten cases had occurred, and gave as the probable source of infection the surface clos-

et and housefly, as none of the closets were fly-proof, and none of the houses screened against insect life.

In the 24th Annual Report of the State Board of Health (for 1912) will be found a detailed report of an investigation to determine the source of the unusual prevalence of typhoid fever in Tampa. The disease was at its height during the winter months of 1911-1912, one hundred and eighteen cases being determined during the months of December, January, February and March. From thirty-four cases in March, the number dropped to thirteen in April. May had only five cases, but there was a slight rise during June, with thirteen cases found.

However, in July there was again a material decrease in the number of cases, with a total of four. This low prevalence continued throughout the summer and fall as follows: August 2; September 2; October 7; November 4; but with the beginning of the winter of 1912-13, typhoid fever again took on an increased prevalence, the number of cases suddenly jumping to twenty-nine in December, was at its height in January with forty-three cases, and continued through February and March with fifty-one additional cases for those two months. However, in the spring of 1913, as was the case in 1912, the number of cases grew less. Twenty were reported in April; May, nine; June, eight; July, seven; August, twelve; September, seven; October, eleven; November, sixteen; and December, ten. Following a curve of the prevalence of typhoid fever in Tampa, by number of cases and months, it will be noted that both years are identical in this particular, that from a high point during the winter months, it dropped to a low point during the spring, took a slight upward course during the summer, and dropped again in the fall, but with the advent of the present winter it is indeed gratifying to see the curves take opposite courses. The curve of 1912 took a decided rise, while in 1913 there was a marked drop.

The lesson learned from this cursory study of the subject indicates growing efficiency of public health administration in Tampa. The low number of typhoid cases during December of 1913, has, it is thought, been due to a greater attention paid to the fly question and to surface drainage, and it is thought, therefore, that

Measles, although a communicable disease, is not classed by the State Board of Health as strictly quarantinable, except so far as isolating actual cases of sickness. Children that have experienced an attack of measles are not prohibited from attending school, even though measles yet exists in the family. While the State Board of Health does not take any very active measures against measles as a disease, because of its general mildness, it is within the power of the municipalities to pass such ordinances as its citizens may demand as necessary. The fact that in this climate diseases of this character are generally so mild, often times only resembling a shade of the disease, makes it perplexing both to make a diagnosis or detect cases. It will be appreciated, therefore, that to resort to quarantine as a distinctive preventive feature against this trouble would be an exceedingly difficult matter, because mild unreported cases will outnumber in many instances, the severe cases, and mild cases can communicate a severe type of the disease to individuals particularly susceptible. The practice of a great many physicians in saying that children ought to have measles while young, should be discouraged. No one should be made sick to carry out a "fad" idea of some one else. As has been stated, measles in this latitude tends to be mild, yet cases do occur where the disease brings forth complications sometimes causing death, or inflicts such after effects as deafness, impaired eyesight, or weakened throat.

SCARLET FEVER.

Cases of scarlet fever reported during the year have been few, but persistent. No epidemic has occurred, but the disease seems to be mildly widespread, having been reported from practically all parts of the State.

Quarantine of premises as a measure for the control of scarlet fever has been abandoned by the Board. The patient is isolated, and the public informed by card warnings on the premises.

HOOKWORM.

Since the resignations of Doctors Young and Diggett, and the consequent closing of the dispensaries in West Florida last March,

no definite plan has been pursued in the eradication of hookworm. Good results are being obtained, however, from the campaign of education which has always been carried on by the Board against this disease. During 1913 there have been received for examination by the laboratories of the State Board of Health three thousand, six hundred and ninety-seven hookworm specimens, one thousand, two hundred and seventy-six of which were found to be positive.

In view of the simple and inexpensive method of treatment of this disease, it may logically be expected that the great majority of those found to be infected have obtained relief.

An active crusade against this disease will be resumed in the near future.

HYDROPHOBIA.

The number of persons receiving Pasteur treatment through the State Board of Health during 1913 was one hundred and seven, as compared with one hundred and fourteen in 1912. Corroborative data may be found by referring to a prepared table on a separate page of this report.

The actual loss to the State through this disease, if loss of life is to be considered, is even greater than last year.

Much live stock has been destroyed throughout the State by infection from rabid dogs, and it seems that rabies is becoming prevalent in the wild animals, and indeed, in all manner of animals. The head of a fox, squirrel, chicken, and a few heads of horses, cows, and cats, were received during the year at the main laboratory of the Board and found positive for rabies, this in addition to the many dog heads, and examination of the brain of several persons dying from hydrophobia.

The only effective measure for the reduction of rabies in the State is by a rigid enforcement of a muzzling ordinance in the municipalities, and a wholesale destruction of homeless roving curs in the country. It is to be regretted that no State-wide muzzling law exists. Although such a bill has reached the Legislature, it still remains to be passed. Such a law, when strictly put in execution, would effect a saving to the State of many thousands of dollars a year by greatly reducing, and in time, practically eradicating, this plague from the State. An untiring educational campaign

has been carried on by the Board through Health Notes, and the press service, and it has been significant of an awakening on this subject, to have received several letters from Mayors of cities asking for advice in the control of this disease.

EXTRACTS FROM MINUTES OF REORGANIZATION MEETING OF THE STATE BOARD OF HEALTH.

On Tuesday, June 10th, 1913, the State Board of Health of Florida convened in Jacksonville, at the offices of the State Board of Health, for the purpose of reorganization of the Board.

Present: Honorable Frank J. Fearnside, Honorable C. G. Memminger, Honorable S. R. Mallory Kennedy, M. D., and Joseph Y. Porter, M. D., State Health Officer.

At 10:15 a. m., Dr. Joseph Y. Porter, as Secretary of the Board, acted as temporary chairman, and called the meeting to order.

Upon motion made by Hon. C. G. Memminger, and seconded by Dr. S. R. Mallory Kennedy, Hon. Frank J. Fearnside, of Palatka, Fla., was elected President of the State Board of Health.

The election of State Health Officer being the next order of business, Dr. Kennedy nominated Dr. Joseph Y. Porter, present State Health Officer, of Key West, Fla., for reappointment for the ensuing term of four years. Mr. Memminger seconded the motion, which was unanimously carried.

The question of dividing the State into sanitary districts was then discussed, at length, by the full Board. Dr. Kennedy moved that the State Health Officer be empowered to employ, with the approval of the President of the Board, and upon recommendation of the resident member, a competent graduate physician, at Key West, Tampa, Jacksonville, and Pensacola, who shall act as assistants to the State Health Officer; * * * that these in no way shall conflict with the appointment of three field men, who shall be likewise under the immediate control of the State Health Officer and President. Mr. Memminger seconded the motion, and there being no objections, it was so ordered.

PUBLICITY AND PUBLICATIONS.

Health Notes, the monthly publication of the State Board of Health, continues to be popular not only in Florida, but seemingly so in other states, if one may judge from the commendation made, and from the circulation, which is steadily increasing. The circulation now is over five thousand copies per month. Until March, 1913, Health Notes was practically the only medium for public health publicity in the State. However, the Board at its annual meeting in February, 1913, approved of the plan of extensive publicity through the newspapers of the State. In order to invite reading, this matter has to be written in a popular and interesting manner, hence this feature was placed in the hands of Mr. George M. Chapin, an experienced newspaper and magazine writer, who obtains the necessary data and subject matter from the State Health Officer, and then places it before the public in an entertaining way. Mr. Chapin is due much credit for making this publicity bureau exceedingly popular and eagerly accepted by the press of the State; and in this manner sanitary subjects are put before many thousands of people. The newspapers are also due credit for their ready co-operation in public health publicity. Aside from Health Notes and the press service, many other articles along public health lines have been contributed to leading newspapers in the State from time to time. Special mention should be made of the writings of Dr. Kennedy in the Pensacola Journal, and articles on veterinary matters by Dr. Charles F. Dawson, Veterinarian of the Board, which have been published throughout the State.

Several publications have been issued by the State Board of Health during 1913, as follows:

Publication:

100. 24th Annual Report of the State Board of Health.
101. President's Letter of Transmittal (Separates from 24th Annual Report).
102. Typhoid Fever in Tampa.
103. Cattle Tick Eradication.
104. Hookworm Disease. (Second Edition.)
105. Malaria.
106. Mosquitoes.
107. Facts about Hog Cholera Serum and Its Distribution. Supplement to Publication 92, Rules and Regulations, Etc.

OFFICE ROUTINE

The number of letters and other mail (with postage) sent out from the Executive Office during the past year is as follows:

	Letters and other 1st class mail.	2nd, 3rd, and 4th class mail.	Total No. Pieces sent Out.	Postage.
January -----	721	112	833	\$22.50
February -----	550	136	686	15.70
March -----	884	921	1805	29.39
April -----	636	1018	1654	37.72
May -----	626	797	1423	26.03
June -----	608	529	1137	23.70
July -----	487	928	1415	22.81
August -----	723	832	1555	27.47
September -----	644	1021	1665	31.34
October -----	763	853	1616	30.98
November -----	1250	1060	2310	48.68
December -----	808	924	1732	35.89
Totals -----	8700	9131	17831	\$352.21

Probably more information and advice is sought of the State Board of Health than any other department of the State. The above tabulation shows the volume of mail in the Executive Office only. Add to this the amount from the branch offices and laboratories, and that sent direct from the Veterinary Division, and it would be more than double.

In order that statistical data, and a history of the various branches of work in a summarized form might be always available, a monthly resume has been compiled, beginning with January, 1913. This also includes the itinerary and occupation of the personnel of the Executive Office during the month, which is made for the convenience of reference of the State Health Officer.

A record of the details of Assistants and nature of complaints handled by every member of the medical staff, from day to day, for the year 1913, is at hand in the office, but its great length prohibits publication.

Literature on the following subjects is on hand for distribution: Annual reports of the State Board of Health, few copies of 1904, 1905, 1906, 1907, 1909; a good supply of 1910, 1911, 1912 and 1913; Cattle Tick Eradication, Publication 103; back numbers of Health Notes; Hog Cholera, Publication 89; Hog Cholera Se-

rum, Facts Regarding, and Its Distribution, Publication 107; Hog Cholera, Supplement to Publication 89; Hookworm Disease, No. 104; Hookworms (leaflet) Publication 75; House Flies, Publication 77, and Poster; Lung Worms, Publication 97; Malaria, Publication 105; Mosquitoes, Publication 106; Ophthalmia Neonatorum, Publication 86; Medical Inspection of Schools, Publication 96; Rules and Regulations and Public Health Statutes, Publication 92, with supplement; Sewage Disposal for Rural Homes, Publication 99; Tuberculosis Posters; Typhoid Primer, Publication 88; Pellagra, (Federal Bulletin); Bulletins on Diphtheria, Scarlet Fever and Smallpox being printed.

The number of pieces of literature, exclusive of regular mailing list of Health Notes and Press Service Bulletins, distributed in 1913, amounted to	10,956
Adding to this 195 Press Service Bulletins for 44 weeks---	8,580
Health Notes, 5,000 copies monthly-----	60,000
Annual Reports (mailing list) -----	200

Would bring the total number pieces distributed to-----79,736 for 1913.

The clerical feature of this work has all been accomplished with the aid of but two Assistants, who have conducted the correspondence, tabulated data, proof-read manuscripts before sending to the printer, kept a correct mailing list of Health Notes and other literature intended for distribution, and in fact, have accurately managed the correspondence of the office. It therefore gives the State Health Officer great pleasure to testify to the worth, diligence and loyalty of both Mr. A. S. Swanson and Miss Begg, who have given him such valuable help.

LABORATORIES.

The laboratories of the State Board of Health, which may well be called Florida's Family Doctor, have continued to give assistance to the physicians of the State and thus to the people—who may be their patients—in affording an early diagnosis and “finding out” of the cause of illness or the extent of disease complication.

The work accomplished by these “Advance Agents” in scien-

tific medicine has steadily increased since the organization of this branch of public health management, from 996 in 1903, to 27,103 during the past year.

During 1913 not less than 25,000 people were advised regarding their physical condition, positively or negatively for disease, as a result of diagnoses made by the laboratories. Dr. Henry Hanson, the efficient Senior Bacteriologist, reports an increase of approximately six thousand specimens examined over last year.

The average cost per specimen examined at the bacteriological laboratories of the State Board of Health during 1913, was \$0.68, as compared with \$0.82 for 1912; a decrease in cost per specimen of \$0.14. The following table shows the average cost per specimen at each of the three laboratories, and a comparison with previous years:

Location	Number of Examinations	Total Cost	Average Cost per Specimen
Jacksonville -----	14,516	\$10,262.38	\$0.71
Tampa -----	8,735	5,695.36	.65
Pensacola -----	3,852	2,586.67	.67
Totals for 1913 -----	27,103	\$18,544.41	\$0.68
Totals for 1912 -----	21,080	17,399.44	.82
Totals for 1911 -----	20,233	16,458.65	.81
Totals, 1903 to 1910, inclusive -----	37,839	46,081.28	1.22

Criticism has been made by some who are not intelligently informed on the subject, that the bacteriological laboratories are chiefly of local benefit; that is to say, do good only in the places where located; that they are giving service practically only to the physicians of Jacksonville, Tampa and Pensacola, and that the State at large is receiving comparatively no aid through these institutions. The fact remains, however, that specimens examined by the laboratories of the Board are received through the mails from over three hundred towns throughout the entire State, as special data compiled by the Senior Bacteriologist and contained in his report to the State Health Officer will show. In such diseases, principally as tuberculosis or typhoid fever, it is not believed the mere fact that specimens must be sent by mail will interfere with diagnoses being sought of the laboratories, by physicians throughout Florida.

The report of the Senior Bacteriologist of the Board is full of entertaining data, and as the extent of what has been accomplished

is gone into quite in detail, those who may be interested are referred to this report for a more extended recital of transactions.

VETERINARY WORK.

During the past year, much of the time of the Veterinary Division has been devoted to educational measures directed towards tick eradication. At the meeting of the Board in February, an amount not to exceed \$5,000 was set aside for this purpose. A good record in this direction has been made during the past year, and much interest has been manifested by the stockmen of the State. In this work about \$2,500 has been expended to January 1st.

The lavish and in some instances wasteful, use of hog cholera serum by the farmers throughout the State has been greatly cut down during the past year, and at the same time, better results obtained from the serum sent out. This has been done by regulations governing its distribution. From the report of the Veterinarian it will be noted the cost of serum distributed amounted to \$8,120.00, as compared with \$12,253.43 in 1912.

Although quite a number of hog raisers now understand the method of correctly administering serum, it is still used indiscriminately by many. It is believed that a greater degree of efficiency could be obtained in the use of hog cholera serum by furnishing it at the cost price to the Board. Even though it were distributed at one-half or one-fourth cost, it would have the effect of bringing the applicants into closer study of its benefits, and economy of use.

GLANDERS.

At the close of the year glanders is again under good control, only one case having been found in December.

During the year sixty-three cases of glanders in horses and mules have been diagnosed by the Veterinary Division. This is the highest number of cases ever recorded, with the exception of 1909. The disease in Florida is undoubtedly imported. Glanders is communicable to man, and is fatal. One case occurred in a human being during the year. A table showing distribution of this

disease, and remarks, will be found in the report of the Veterinarian of the State Board of Health to the State Health Officer.

PUBLIC HEALTH LEGISLATION.

A saving of three thousand dollars per annum to the State would have been effected by the passage of a bill introduced in the last Legislature, providing free transportation for the employees of the Board when on public health details. Aside from the economical feature which could have thus been brought about, the efficiency of the field force would have been greatly increased, for then investigations and public health work could have been pushed to the remote parts of the State, without having to consider the cost of transportation. The people of the State would have monetarily profited by the granting of free travel to the employees of the State Board of Health, the railroads and other public transportation agencies would also have been gainers by this source, and the citizens generally would have been benefited, for the Board would have been enabled to give greater assistance to the agricultural interests, particularly in connection with the administration of hog cholera serum and the furtherance of cattle tick eradication. When the public profits by more extended public health work, and the agricultural and stock raising industries derive benefit, the transportation companies likewise profit—hence, they signified a willingness to grant passes to the employees of the State Board of Health, if permitted to do so by the Legislature, and did not consider the concession as a donation, for they will enjoy a pecuniary advantage of the reciprocity. The State health officials and employees of Alabama and other states are permitted to accept free transportation, and the State Board of Health of Florida has long been desirous of obtaining the same privilege. After receiving the consent and having noted the willingness of the Presidents of the leading railroads operating in Florida to give free transportation to the employees of the State Board of Health, and having viewed the matter from a logical standpoint that, if sheriffs, who are allowed mileage and fees for travel, and clergymen and those connected with eleemosynary institutions were by statute permitted to accept free transportation, it could not be understood why public health offi-

cials who are engaged in a vital campaign against disease and in the interest of humanity, should be denied a similar legislative privilege, the following bill was carefully drawn and introduced, but was, however, defeated in the Legislature of 1913—it has been understood, at the instance of the Railroad Commission:

A Bill to be entitled An Act Authorizing Common Carriers, including Railroad Companies, to grant free passage or tickets to the State Health Officer, Assistant State Health Officer and Employees of the State Board of Health.

Be It Enacted by the Legislature of the State of Florida:

SECTION 1. That it shall be lawful for common carriers, including Railroad Companies, operating in this State to grant free passage or free tickets to the State Health Officer, Assistant State Health Officers, and Agents or Employees of the State Board of Health, for their use when traveling in connection with the duties of their respective positions.

SECTION 2. That all laws in conflict or inconsistent herewith are hereby repealed, and this Act shall take effect immediately upon its becoming a law.

CATTLE TICK ERADICATION.

Chapter 5933 of the Laws of Florida, 1909, provides for the prevention, suppression and control of dangerous, contagious and infectious diseases in domestic animals and live stock, and imposes certain duties and confers certain powers on the State Board of Health for such purposes, among which is the employment of the most practical means for the prevention and suppression of Southern cattle fever, or Texas fever. Pursuant to this Act, the State Board of Health at its annual meeting in February, 1913, adopted certain preliminary measures for the eradication of the Southern cattle tick, *Margaropus annulatus*, which causes Texas fever in cattle. The means then proposed will take many years and a large amount of money to accomplish. It was decided, therefore, that more specific legislation was advisable to carry on this work, and consequently, the following bill was recommended and passed:

LAWS OF FLORIDA, 1913.

CHAPTER 6434—(No. 14).

An Act to Provide the State Board of Health With Funds for the Eradication of the Southern Cattle Tick; to Authorize the County Commissioners of the Various Counties to Appropriate Funds to Be Used in Such Work; and to Permit the Appointment of Federal Officials as Agents Without Pay.

Be It Enacted by the Legislature of the State of Florida:

SECTION 1. The State Board of Health is hereby authorized, empowered and directed to expend, under the regulations provided by existing law, such amounts as the Board may deem necessary and expedient out of the funds derived from the operation of Chapter 4693, Acts of 1899, in the control and eradication of the Southern Cattle Tick, through the employment of State and County Agents, payment for labor and materials, and for any other expenditures that may be found useful and necessary in the prosecution of such work; and the Board of Health is hereby authorized and empowered, after investigation of suitable locations, and upon recommendation of the Executive Committee of the Florida State Live Stock Association, to construct cattle dipping vats in communities where such aid is deemed useful for demonstration and proper conduct of tick eradication work.

SECTION 2. The County Commissioners of any county of the State of Florida are hereby authorized and empowered to appropriate such amounts of money as they may deem adequate and necessary, for the purpose of co-operating with the officials of the State Board of Health in eradicating the Southern Cattle Tick, and in preventing contagious or infectious diseases of animals; or whenever funds for this purpose are raised by private subscriptions of individuals.

SECTION 3. The State Health Officer is hereby authorized and empowered to appoint officials of the United States Department of Agriculture detailed for co-operative work in the eradication of the Southern Cattle Tick, or the control or suppression of contagious or infectious diseases of animals in Florida, as agents of the State Board of Health; Provided, that they act without pay from the State of Florida.

SECTION 4. This act shall become effective upon its passage and approval by the Governor, or upon its becoming a law without such approval.

Approved June 7, 1913.

POLLUTION OF UNDERGROUND WATERS.

It is important that the State Board of Health control the water supplies of the State, as the fouling of underground waters by the introduction of raw and untreated sewage into sink holes or sink wells is undoubtedly dangerous, and may well be considered a menace to health. The following bill, drawn by Hon. C. G. Memminger, of Lakeland, Fla., and Mr. Chester R. McFarland, Secretary of the Tampa Water Works, Tampa, Fla., received the support of the State Board of Health, and was passed by the Legislature; this Act makes possible the preservation of purity of underground waters.

While it is a commendable measure, and one which had the warm support of the Executive Office, it is not thought that the framers of the bill, nor those from whom the idea originated, de-

sired to place under the legal ban, any drainage of surface water which might accumulate from storms or excessive rainfall, for no possible harm or pollution could come from draining off this water which would not occur from natural seepage:

CHAPTER 6443. (No. 23.)

An Act To Preserve the Purity of the Underground Waters of the State of Florida for the Protection of the Public Health.

Be it Enacted by the Legislature of the State of Florida:

SECTION 1. That the term "Underground Waters of the State," when used in this Act, shall include all underground streams and springs and underground waters within the borders of the State of Florida, whether flowing in underground channels or passing through the pores of the rocks.

SECTION 2. No municipal corporation, private corporation, person or persons, within the State, shall, after the passing of this Act, use any cavity, sink, driven or drilled well now in existence, or sink any new well within the corporate limits, or within five miles of the corporate limits of any incorporated city or town, or within any unincorporated city, town or village or within five miles thereof, for the purpose of draining any surface water or discharging any sewerage* into the underground waters of the State, without first obtaining a written permit from the State Board of Health.

SECTION 3. Every such permit for the discharge of sewerage, or surface water, shall be revocable or subject to modification or change by the State Board of Health, on due notice, after an investigation and hearing, and an opportunity for all interests and persons interested therein to be heard thereon; said notice or notices being served on the persons owning, maintaining or using the well, cavity or sink, and by publication for two weeks in a newspaper published in the county in which said well, cavity or sink is located. The length of time, after the receipt of the notice within which it shall be discontinued may be stated in the permit. All such permits, before becoming operative, shall be filed in the office of the Clerk of the Circuit Court for the County in which such permit has been granted.

SECTION 4. For the purpose of this Act, sewerage shall be defined as any substance that contains any of the waste products or excrementitious or other discharges from the bodies of human being or animals.

SECTION 5. Every individual, municipal corporation, private corporation or company, shall discontinue the discharge within the corporate limits or within five miles of the corporate limits of any incorporated city or town, or within any unincorporated city, town or village or within five miles thereof, of sewerage or surface drainage into any of the underground waters of the State within ten days after having been so ordered by the State Board of Health.

SECTION 6. Any municipal corporation, private corporation, person or persons that shall discharge sewerage or surface drainage, or permit the same to flow into the underground waters of the State, contrary to the

*This Act is printed exactly as certified by the Secretary of State, and the State Board of Health is not responsible for the misuse of the words "sewage" and "sewerage."

provisions of this Act, shall be deemed guilty of a misdemeanor, and shall upon conviction be punished by a fine of twenty-five (\$25.00) dollars for each offence, and the doing of the prohibited Act for each day shall constitute a separate offence, or by imprisonment not exceeding one month, or both, at the discretion of the Court.

SECTION 7. All laws or parts of laws in conflict with the provisions hereof, are hereby repealed.

Approved June 7, 1913.

FINANCES.

The question of cost enters largely into the problem of maintenance of health government equally as it does in commercial business—but, as in the mercantile world, the volume of trade helps to build up profits and thus obtain satisfactory results, so in the conduct of health campaigns, and sanitary reforms, it is the results that have been accomplished and the people benefited both individually and collectively, which should be the consideration, and not merely the sum total of money expended.

The table of expenditures on another page gives in detailed statement the amount which the Board has expended during the year in its endeavor to preserve the health of the State. The total of expenditures during the year has been \$95,241.81, itemized as shown in table No. 1.

The amount appears large on first glance, but when each item of expenditure is taken up and carefully analyzed, it will be seen that, with the varied demands which the Board had to meet in fulfilling the obligations placed upon it by law, an economical administration of the State's funds has been effected. The clerical force employed at the central administration building in Jacksonville is not nearly large enough to fulfill the demands which the correspondence, auditing of accounts, central laboratory, the veterinary, and lately the statistical department, imposes; but the State Health Officer has hesitated to increase this force because of the apparently large sum already required for salaries and office equipment. It may be interesting, and as information also, to recite just what is expected of the Board in the matter of health administration in the State, and then compare the work performed with the cost of administration. The statutes of the State demand that the Board shall care for smallpox occurring among the indigent, and also for a free

distribution of vaccine virus, as a protective measure against the disease, and as an effective aid in suppressing and stamping it out in a community wherever occurring; that crippled children, whose parents are without the necessary financial or monetary means of correcting deformities shall have the same done at the expense of the State; that Pasteur treatment for the prevention of hydrophobia in those who may have been bitten by animals, known to be, or suspected of being, rabid, and who are financially unable to defray the expense, shall be supplied free with this preventive; the supplying of diphtheria anti-toxin as a preventive and curative agent of diphtheria among the indigent; in pushing the campaign against hookworm for the relief of the indigent weaklings of the State from this cause; that the domestic animals shall be looked after in their health, and that glanders occurring in horses and mules shall be investigated, and when the animals are killed shall be paid for by the State; that the farmers of the State shall be supplied without cost with hog cholera serum, which in itself is an expenditure of from fifteen to twenty thousand dollars a year. It can be understood, therefore, without further detailed explanation, where the funds collected for the maintenance of the Health Department of the State go, and how expended.

There are two items of expense that to the mind of the State Health Officer could and should be eliminated as soon as the Legislature can be influenced to enact the necessary amendments to certain laws now existing: The destruction of glandered animals should not be paid for by the State; neither should hog cholera serum be supplied free. It was pointed out in last year's report and due emphasis given to the statement because of the approaching session of the Legislature (when it was hoped that the evil as it appeared to the State Health Officer might be corrected), that the tax payers of the State should no more be called upon to pay for animals killed on account of glanders, as an equitable proposition, than that the State should be asked to reimburse citrus fruit growers for the loss of their groves by insect destruction or by freezing. On the same basis of reasoning that glandered animals when destroyed should be paid for by the State, should not hogs and swine herds killed by hog cholera also be a charge upon the State's bounty? It is believed that, if the remuneration propo-

sition is eliminated, the stock owners would be more careful to see, when purchasing animals brought into the State for sale, that they were free from this disease. Under the present system of paying for destruction of glandered animals there is a strong inducement for unscrupulous horse dealers to buy diseased stock elsewhere and introduce into the State animals but slightly affected, which, when purchased at low prices, can be sold at an attractive figure and with profit. Therefore, in paying for the destruction of these animals, the State is unintentionally offering an opportunity to commit fraud upon the tax payers.

Florida is the only State in the Union which furnishes hog cholera serum free to agricultural interests; in other States this serum is furnished at cost price of production, which would seem to be a better system and one where economy can be practiced and equal efficiency obtained.

The present enactment gives no discretionary powers to the Executive Officer of the Board in supplying this commodity on demand, for the law reads that the serum shall be furnished free to the farmers of the State on application. Often times an application comes without any information as to number of hogs to be treated, weight, or other needful data. The Executive Officer has tried to safeguard this gift of the State as far as possible by requiring blanks to be filled out so that the statistics might be tabulated for record. This has incurred criticism in a great many instances; and some charge that this delay has caused the loss of a good many swine before the serum could be had. It is an old saying that whatever is cheap and easily obtained for nothing, is not valued, and certainly this has been true in regard to the distribution of the serum, for on more than one occasion the product has been requested when there was no certainty of its being used; and when returned after several weeks, the bottles were unopened, and worthless for future distribution, because of length of time which had elapsed since it left the office. This serum like many others, has a certain definite period of activity, and time plays an important factor in its life. An instance was cited last year, in which a bottle of hog cholera serum valued at \$20.00 was found on the shelf of a barber shop which, upon inquiry, was found to have been traded in for shaves.

The expenditures of the state funds for the destruction of glandered animals and the free distribution of hog cholera serum certainly deserves consideration and careful thought on the part of the Board, whether a recommendation for an amendment to the present laws, should not be insisted upon.

* * * * *

Before closing this narrative of "Current Events" of the year in health circles of the State, attention is invited to an exceedingly interesting report of Dr. E. W. Diggett, who was commissioned by the State Health Officer to investigate the health conditions of the Seminole Indians living in the "Big Cypress" section of the Everglades. Some years ago when Dr. Diggett was in the State Health Service, as an Assistant to the State Health Officer, he conducted a campaign against hookworm in the counties of Lee and DeSoto, and at that time became acquainted with Dr. Godden, the medical Missionary to the Indian settlement outlying Fort Myers. Both being Englishmen by birth, they were very naturally attracted to each other, and Dr. Godden interested Dr. Diggett in the Indian work, so much so, that permission was given to Dr. Diggett to accompany Dr. Godden to the Mission House at Immokalee, some seventy miles from Fort Myers. The object of this visit was to learn of the existence of hookworm among the Indians and to gather other instructive facts connected with this race. From this visit, keen desire was created on the part of the Executive office to learn more of the social as well as physical traits of this remnant of a once powerful tribe, and accordingly, as a petition from the Indians to the Board was received for another visit from Dr. Diggett, and Dr. Diggett expressed a wish to further pursue the study of the Seminoles, another detail was arranged for him, and the months of October, November and December, Dr. Diggett spent with the Indians of the "Big Cypress." His history of events as occurring during this detail will afford much pleasure, it is thought, to the reader.

If the Board considers this subject of sufficient importance to pursue the study further, it is suggested that Dr. Diggett be again detailed, and that he visit the Okeechobee tribe. The Seminoles seem to have confidence in Dr. Diggett; in fact they petitioned the Board as has already been mentioned, for a visit from him.

Many other topics could be discussed with interest, and it

may be said, with profit, at this time; but this report, with the attached papers from the laboratories, assistants to the State Health Officer, Veterinary and other Divisions, is already a lengthy one, and besides, the Health Notes and the Press Service of the Board has weekly and monthly contributed to sanitary information and useful advice in the manner and methods of healthful living; so that it is not necessary, it is thought, to repeat what has been discussed at other times.

AUDITING AND ACCOUNTS

It is difficult to accurately state in detail the amount and varied character of work in this division of the State Health Department, because of the many items which go to make up a report of this nature.

Since I was placed in charge of this branch in 1905, after the death of Mr. Durrance, chief clerk in the executive office at that time, the work has steadily increased. The number of vouchers for claims submitted against the Board, which have to be made as the Comptroller of the State directs, has grown from 746 in 1906 to 1247 in 1913. Each claim coming in against the Board has to be carefully scrutinized, with more or less correspondence to be done, then vouchered and returned to payees for their signatures who many times put it aside, forgetting to sign and return them until they are written to, which means delay and misunderstanding. All this and more, before the accounts can be properly submitted for approval by the officials of the Board charged under law for this purpose. Add to this the book-keeping, where is entered in its own appropriate column the various items, so that at a glance it can be seen where and for what, the Board's money is paid. For each account audited, there are seven records on file, not including the original voucher, which goes to the Comptroller.

Each Legislature for several years has added to the supervisory work of the Board, with additional increase of money outlays. For instance: the free distribution of Hog Cholera Serum to the farmers of the State; payment for glandered animals; the educational effort of the Board in Cattle Tick Eradication; Pasteur Treatment to the indigent; care and treatment of crippled children; construction of central laboratory and office building, with filling in of low grounds around the building; grassing same; two branch laboratories and additional field Assistants to the State Health Officer, has materially increased the amount of money expended by the Board this year over former years, as well as the amount of clerical work.

The money accounts of the Board overlap from year to year, making the statement of the Comptroller, and that published by the State Board of Health disagree in totals. This is explained by the Board balancing its accounts of the year on the 31st of December and charging the amount expended during the year, to that year alone, while in the Comptroller's statements bills paid in January, although chargeable to the year previous, are included for the year in which they were honored.

Respectfully,

L. A. HERNDONE

Auditor.

No. 1

THE EXPENDITURES IN DETAIL.

	Item	Total
Per diem and mileage, Members of the board, February and June meetings -----	\$ 280.20	\$ 280.20
Salaries and Travel Expenses:		
Salary State Health Officer -----	3,000.00	
Travel expenses, State Health Officer -----	1,349.97	4,349.97
Salaries of seven regular Assistants to State Health Officer, and three Assistants resigned -----	11,011.91	
Travel expenses, Assistants to State Health Officer ----	2,603.45	13,615.36
Salaries, County Agents -----	1,782.50	1,782.50
Salaries Veterinary Division -----	4,012.42	
Travel expenses, Veterinary Division, including per diem Tick Eradication Agents -----	2,115.21	6,127.63
Salaries of Sanitary Patrolmen, Jacksonville, Tampa Pensacola and Key West -----	4,245.49	4,245.49
Maintenance of Executive Office, Jacksonville:		
Clerical Assistance: Salaries of three clerks and office boy, and special clerical service -----	3,889.93	
Vital Statistics: Salary of Statistician and expenditure for reports -----	613.69	
General office expenses, including telephone charges, postage, expressage and office fixtures -----	1,910.58	
Printing, publications and incidental expense, stationery, records, etc. -----	3,882.62	
Telegraph tolls -----	419.00	
Insurance and miscellaneous items -----	156.69	10,872.51
Library: equipment and maintenance -----		845.75
Administrative Building: equipment and maintenance ----		2,976.61

Grounds, Administrative Building: filling, grading, fencing etc. -----		2,892.00
County Isolation Hospitals: Equipment and Maintenance:		
Dade County -----	189.50	
Duval County -----	3,874.08	
Escambia County -----	935.09	
Hillsborough County -----	1,057.30	6,055.97
Smallpox expense, unclassified -----		2,643.71
Vaccine (smallpox) -----		1,371.50
Diththeria and tetanus antitoxins -----		1,416.42
Pasteur treatment for the indigent -----		1,434.15
Expense incident to uncinariasis, unclassified -----		703.13
Reimbursement for glandered animals (including \$4.45 veterinarian's fee) -----		4,654.45
Hog cholera serum -----		7,809.13
Crippled children: hospital and incidental expense -----		2,620.92
Bacteriological Laboratories:		
Jacksonville: Salaries, Senior Bacteriologist, two assist- ants, stenographer and two orderlies -----	6,860.76	
Equipment and maintenance -----	3,401.62	10,262.38
Tampa: Salaries two bacteriologists, stenographer and janitor -----	4,700.38	
Equipment and maintenance -----	994.98	5,695.36
Pensacola: Salaries one bacteriologist and office boy ----	2,179.92	
Equipment and maintenance -----	406.75	2,586.67
Total expenditures, 1913 -----		\$95,241.81

No. 2.

RECEIPTS.

	Regular Requisition	Special Requisition	Returned to Comptroller	Total
January -----	\$ 2,906.52	\$2,771.23		\$ 5,677.75
February -----	3,235.45	3,443.34		
		2,259.10		8,937.89
March -----	2,943.46	834.00		
		3,342.76		
		1,172.47		8,292.69
April -----	2,961.30	3,849.77		6,811.07
May -----	2,985.54	3,153.49		6,139.03
June -----	3,418.79	750.00		
		3,249.41		
		2,487.91		9,906.11
July -----	4,125.43	3,954.34		8,079.77
August -----	3,941.64	2,839.21	\$ 5.00	
		1,947.45		8,723.30

September -----	3,870.42	839.30 3,585.26	95.75	8,199.23
October -----	4,173.07	3,889.06 1,380.25	98.05	9,344.33
November -----	4,119.50	868.05 3,174.42	15.45	8,146.52
December -----	4,078.90	2,937.72	32.50	6,984.12
Totals -----	<u>\$42,760.02</u>	<u>\$52,728.54</u>	<u>\$246.75</u>	<u>\$95,241.81</u>
Total receipts, 1913 -----				\$95,488.56
Returned to Comptroller, 1913 -----				246.75
Total amount expended, 1913 -----				<u>\$95,241.81</u>

REPORT OF VITAL STATISTICIAN

I herewith submit a statement of the present status of Vital Statistics and a brief review of what was done by the State Board of Health, during 1913, in this State towards the eventual accurate collection of records of births and deaths.

Before stating the work and situation in Florida, it will be well to understand just what vital statistics are, and to glance at its present status abroad and look into what the other States of this Union are doing.

Vital Statistics has been stated to be the science of numbers applied to the life-history of communities and nations, comprising the data of births and deaths, and other important events in the life-history of individuals, as marriage, and sickness. The data of sickness, is, however, usually dealt with separately, under the title "Morbidity Statistics," and the more important vital data usually gathered and compared are births and deaths, and these are the statistics referred to herein.

In European countries the records of births and deaths have been kept for many years, more perfectly in some than in others, but at the present time, one is fairly safe in saying that in the Great Powers, excepting possibly Russia, and many of their possessions and colonies, practically complete and accurate reports are obtainable as to these facts. And most of the smaller countries of Europe have even more perfect records than the larger, notably Belgium, Holland, Denmark, Sweden, Norway and Switzerland. When this statement is made, it means more than appears on its face—it means that probably ninety per cent of all persons now living in these countries have had their births recorded, and that of present births and deaths, probably at least ninety-five per cent are recorded.

It is unnecessary to say anything of other foreign nations, because, for purposes of comparison with the United States, the European races, whose blood enters so largely into that of this land, are the only ones fairly comparable.

In the United States, the collection of these records, with any such degree of accuracy, as in Europe, is a thing of only a few years. To say nothing of the early history of the work, it will suffice to state that in 1900 the U. S. Census Bureau tabulated the data of deaths from the six New England States, New York, New Jersey, Michigan, Indiana, the District of Columbia, and a large number of cities of 8,000 or more population in other States; and these states and cities, comprising a total population of nearly twenty-nine million, about forty percent of that of the nation, were termed the Registration Area for deaths.

Since then, this area has enlarged until at the beginning of 1914 it consists of twenty-three states, the District of Columbia, all cities in North Carolina of one thousand population and over, and about 40 cities in other States; being nearly sixty-three million and about sixty-five per cent of the people of the United States.

To enter this registration area, the Census Office demands that at least ninety per cent of all deaths be recorded, as it is considered that any statistics of less degree of accuracy are misleading and cannot be used in comparison either with each other or with results in other countries.

It should be noted here, that there is no registration area for births, and that up to this present the Census Office has not published official statements of the collection of such reports save in a few instances as taken from reports of certain few states and cities.

That portion of the registration area south of the Mason and Dixon line and the Ohio River and east of the Mississippi River, is of special interest to those in Florida and adjoining states, as it contains the large proportion of colored element, and has more or less similar health problems.

Of the states in this section, only Kentucky, Maryland, Virginia, the District of Columbia, and the cities of North Carolina, are within the registration area, and of the cities in other States the following 15 have been admitted.

ALABAMA—Birmingham, Mobile, Montgomery.

FLORIDA—Jacksonville, Key West, Pensacola.

GEORGIA—Atlanta, Augusta, Savannah.

LOUISIANA—New Orleans.

SOUTH CAROLINA—Charleston.

TENNESSEE—Knoxville, Memphis, Nashville.

WEST VIRGINIA—Wheeling.

Of the States of the above section not within the area, Tennessee and Mississippi have lately adopted the model law for registration of births and deaths recommended by the Census Office and are so vigorously enforcing it that they may soon be admitted. North Carolina has passed the law for statewide registration, but an amendment eliminated the requirement of burial permits in rural districts; when this is made necessary, the State will in all probability be admitted soon thereafter. Louisiana, which lies partially east of the Mississippi, has the principals of the model law in operation, and only needs a provision for payment of reports to enable the State to soon collect death statistics sufficiently accurate to enter. West Virginia is still without a satisfactory law, but she is so far north as to be unnecessary in comparison of results.

Of the remaining states, Alabama is attempting under an inadequate law to collect statistics, but results are inaccurate. She is considering the adoption of ordinances requiring the burial permit in municipalities of 500 and over, which, if effectively enforced would allow this part of her population to soon be within the registration area.

Georgia and South Carolina have no State laws for collecting vital statistics, but in Georgia at the last legislature the model law was introduced and passed second reading in the House, only failing on account of short session. It is believed an acceptable law will be passed in 1914. In South Carolina a beginning was made by the 1913 legislature considering a measure, and it is believed the model law will be introduced at the next session.

These two states, with Alabama and West Virginia, have not as yet adopted the standard certificates uniformly used in the registration area, and prescribed by the model law for registration of deaths and births; all of the other states in this Southern section including Florida, have adopted and are using these standard certificates, which are necessary for uniform and comparable statistics, especially of causes of death and occupational mortality.

In all these neighbor states there is an awakened interest in the movement and at the next meetings of their legislatures there may be steps taken which will put them within reasonable possibility of collecting the required ninety per cent of death reports.

So much for the status of collecting reports of deaths. As stated before, there is no registration area for births, only a few

states having returns considered as possibly ninety per cent accurate, only one of these, Kentucky, being in the South. Of the cities collecting such reports there is probably a larger proportion of that degree of accuracy, but the only one in the South, Washington, D. C., claims but ninety-five per cent.

The experience of all the states which have been admitted to the area, as well as the failures in the others, shows that the principles of the model law are the needed points for requisite accuracy of returns. These are, local registrars directly responsible to a state registrar, the prompt filing of certificates of birth and death (with the absolutely necessary check of the compulsory burial permit for the latter) with the local registrar—and the prompt return of the original certificates directly from the local registrar to the State registrar. These words are those of Dr. Cressy L. Wilbur, Chief Statistician of the Census Bureau, the acknowledged authority of the United States on this subject.

THE WORK AND SITUATION IN FLORIDA.

The attempts of the State Board of Health to collect reports of births and deaths in this State, both before and after the passage of the Act of 1899, establishing the Bureau of Vital Statistics with the State Health Officer, as *ex officio* Registrar for the State, and the failures to obtain any results sufficiently accurate to bear careful scrutiny or to be used in comparison, have been set forth at large in annual reports of the Board and are unnecessary to be reiterated here.

Early in 1913 the project of the collection of reports through the co-operation of municipal authorities in cities of 2,000 population and over was considered and investigated. The Bureau of the Census was consulted and asked whether the results of such collection would be used and published in its compilations of deaths and annual mortality statistics. The reply was to the effect that if ninety per cent or over of deaths occurring among the population of these cities was reported according to the requirements of that office, the results would be received and published and these cities would be placed within the registration area *as a class*.

Accordingly the authorities of the qualified cities were written and asked if they would take up the work under existing, or by the passage of new or amendment of imperfect, municipal ordinances for the prompt and accurate reporting of all deaths, and also

births, within their limits, and the nomination or appointment of registrars, to be approved by the Board, to transmit such report to its office.

Within the State there are twenty-nine cities which had a mid-year population, the basis used in vital statistics calculations, according to the estimates of the Bureau of the Census, of 2,000 or more as of July 1, 1913.

They are as follows, arranged in descending order of size of these estimates, with figures of the U. S. Census of April 15, 1910, for comparison:

	April 15, 1910	Estimated July 1, 1913
Jacksonville -----	57,699	67,209
Tampa -----	37,782	46,792
Pensacola -----	22,982	24,682
Key West -----	19,945	20,863
West Tampa -----	8,258	10,174
Gainesville -----	6,183	7,011
Miami -----	5,471	6,701
St. Augustine -----	5,494	5,889
Tallahassee -----	5,018	5,679
Lake City -----	5,032	5,363
St. Petersburg -----	4,127	4,955
Ocala -----	4,370	4,691
Lakeland -----	3,719	4,544
Orlando -----	3,894	4,353
Sanford -----	3,570	4,257
Live Oak -----	3,450	4,031
Quincy -----	3,204	3,968
Palatka -----	3,779	3,933
Fernandina -----	3,482	3,559
Daytona -----	3,082	3,534
DeLand -----	2,812	3,255
Apalachicola -----	3,065	3,062
Plant City -----	2,481	3,052
Fort Myers -----	2,463	2,957
Bartow -----	2,662	2,881
Tarpon Springs -----	2,212	2,754
DeFuniak Springs -----	2,017	2,543
Kissimmee -----	2,157	2,489
Marianna -----	1,915	2,243

These estimated populations of 1913 may be disappointing to some, but it should be remembered that they place all communities within the United States upon an equal footing for comparison, as

the same methods are used in all estimating, that this is the necessary factor, and that absolute size is of no moment.

It should be noted here that when the matter was taken up with the Census Office, the matter of size of cities was based upon the figures of the 1910 census and that all of the above list were above the stated population at that time, excepting the last named, which afterwards, by extending its limits, brought itself within the qualified list. And it should also be noted that there are twenty-nine cities listed, while publications, letters and discussions of this subject, have always referred to the twenty-eight cities. This resulted from the fact that the Registrar of Tampa, by agreement with this Board and the cities of Tampa and West Tampa, acted and is still acting for both, and therefore these two cities have been heretofore classed as one.

The replies from these cities to the requests for co-operation were most encouraging and up to this time all, with but few exceptions, have passed ordinances and appointed registrars. The few exceptions have, it is confidently believed, arranged to collect reports from and after January 1, 1914, voluntarily, pending the passage of necessary ordinances or appointment of registrars, which steps are to be taken in the near future.

The registrars in these cities send to this office the original records of births and deaths filed with them keeping copies for their local reference, and are paid 25 cents for each, provided their total returns are within ninety per cent of accuracy. In a few cities, notably Jacksonville, where provision for filing records is made, transcripts are sent here for compilation, in lieu of the originals, for which the sum of six cents each is paid. It would seem that, except where proper precautions against fire and loss are taken, the slight saving in cost between the transcripts and originals hardly justifies the possibility of damage to individuals in case of loss or destruction of the original records.

A number of these cities have Boards of Health, some have City Health Officers, some City Physicians, a few have all, more, two of the three. Since the work in behalf of vital statistics has been vigorously pushed, a number of cities without health organizations or authorities have organized them, and more are now doing so. And this is true both of cities in the qualified list and also of smaller communities. Several have written for advice as to organ-

ization and ordinances and these have been helped as far as possible.

The ordinances for reporting births and deaths, both those in force and those passed lately, are quite varied. A few, especially in larger cities, provide for burial permits, but this necessary check upon the reporting of deaths is generally wanting. Some provide for one of the most essential elements—promptness—by requiring all reports to be filed within the few days provided by the model law, but some only require them to be reported monthly.

The above cited variances strongly suggest the need of uniformity, both in an ordinance to conform as far as may be to the model law, with modifications for local conditions if necessary, and primarily in the institution of some sort of health department in each community. These health authorities should use the local returns to keep posted as to existence of disease, especially of contagious nature, to investigate all deaths without medical attendance, and in those with suspicious circumstances to refer cases to coroner, also to refer any case seeming to need police scrutiny to the proper official. The conservation of infant life and health would also be under their care, and births without physicians in attendance could be looked after to prevent blindness and tetanus. The city health officer or city physician would also be able to assist physicians and the registrar in having the cause of death in death certificates properly assigned, and would be otherwise of great assistance to nonmedical registrars in many matters involving professional advice.

During the campaign to have the qualified cities pass ordinances and appoint registrars publicity was given the work through press bulletins, both those regularly going to all the papers in the State, and special to papers in all the cities of the list. With the latter were letters to the editors urging them to prominently publish all matter relating to vital statistics and to editorially urge the work. Extra copies of these bulletins were also mailed in large numbers to all who might help in the backward cities.

In the August number of Health Notes the proposed system was set out fully and since then each number has had articles relating to it, some of general interest and some especially on points of practice for registrars, physicians, midwives and others reporting births and deaths. Besides the regular distribution of these

numbers of Health Notes, marked copies have been mailed to all who were interested.

Matter was also furnished the local papers for use in notices favorable to the plan and was published by them.

And here it should be stated that almost without exception the press of the State has shown its interest and appreciation of the work by promptly printing material furnished them and favorable editorial comment. It is believed much of the interest now generally shown has been due to the articles published by the papers of the State and to their editors thanks should be extended.

The records which have been received through the registrars of these qualified cities up to January 1st, while not quite of the required accuracy, show much improvement both in percentage and in the other requirements, and it can hardly be doubted that they will meet the requirements of the Bureau of the Census during 1914.

All of the records so far received, with those from other parts of the State sent in direct, and the great accumulation gathered since the fire of 1901, while not of value statistically, will be of utmost importance to individuals as evidence of births and deaths when they are properly safeguarded, filed and indexed.

MORBIDITY STATISTICS.

Before closing, a few words should be said as to morbidity statistics. By statute certain diseases are required to be reported to the President of the Board, and by the Rules and Regulations a number of others are made reportable to the State Health Officer. To assist physicians in their duty, post cards have been widely distributed during the year, which need only the insertion of name, location, and a few personal items of patient, the checking of the disease, the physician's signature, and mailing. The reports coming in, do not indicate that these diseases, except possibly those most dangerous, are reported fully, and it would seem that future legislation, both state and local, should lay more stress upon the necessity of such reports. Ordinances in the cities where the reporting of births and deaths is enforced, might well embody the essentials of the draft of the model law for notification of occurrence and prevalence of certain diseases, which has lately been adopted at a

conference of State and Territorial health authorities with the U. S. Public Health Service, and the future State legislation should be in full accord with its provisions.

Respectfully,
W. VOORHEES,
Vital Statistician.

LIBRARY

As requested, I herewith submit the following report of the work done in the Library during the year ending December 31, 1913.

Previous to 1913 there was not much accomplished toward a library. Owing to insufficient space in the old quarters of the State Board of Health, all books, periodicals and pamphlets, after being scanned on their arrival were kept stored away in a few bookcases, cupboards, or anywhere they could be put to safely preserve them.

When the Offices were moved to the State Board of Health Building in Springfield Park, this pile of books, pamphlets, etc., that had been accumulating since the fire of 1901, was temporarily deposited in a large room fourteen by twenty-nine feet, occupying the north end of the building on the second floor.

In February, 1913, I assumed the duties of librarian, together with my other work as filing clerk.

While there is still a great deal to be done, this room is now one of the most attractive in the building. The floor has been covered with solid color, dull brown linoleum, and the woodwork and furniture is mission in Early English finish.

There are in the library now, 1,408 books, most of which are bound volumes of Medical Journals, Annual Reports of State and City Boards of Health, and a number of medical books given by Drs. Murray, Sweeting and Porter of Key West. There are also 2,000 pamphlets. All of these books and pamphlets have been listed, "Property of the State Board of Health of Florida;" classified by subject according to the Dewey Decimal System; given author numbers by Cutter System; marked and filed in order. Pockets have been pasted in all of the books and card catalog made consisting of three cards, author, subject, and title, for each book. Of the pamphlets 248 have cataloged, but they are filed in vertical steel cases and it only takes a few moments to run over them and find anything needed. Before the end of 1914 I hope to have the catalog completed. A book or charging card has been made for each book and pamphlet, and we have a very simple and efficient charg-

ing system, which enables me to keep account of each book or pamphlet that is out of the room.

The library subscribes for the following periodicals:

Annals of Tropical Medicine and Parasitology, Zeitschrift f. Hygiene u. Infektionskrankheiten Philippine Journal of Science, Series B, C, and D, Centralblatt fur Bakteriologie, Originale Journal of Parasitology and Bacteriology, Journal of Tropical Medicine and Hygiene, American Journal of Medical Science, Johns Hopkins Hospital Bulletin, Journal of Infectious Diseases, Annales de l'Institut Pasteur, American Veterinary Review, British Medical Journal, Lancet, (London), Parasitology, Pathfinder, Science.

There are sent complimentary and in exchange for Health Notes:

Monthly Cyclopedia and Medical Bulletin, California State Medical Journal, Virginia Semi-Medical Monthly, Journal of the Outdoor Life, Long Island Medical Journal, Mulford Veterinary Bulletin, Sanidad y Beneficencia, Public Health Reports, Modern Sanitation, Bacterial Therapist, Clinical Excerpts.

The Journal of the American Medical Association, American Journal of Public Health, Southern Medical Journal and Military Surgeon are given by Dr. Joseph Y. Porter, Sr. The Journal of the American Medical Association from vol. 46 to vol. 58 inclusive was given by Dr. Hiram Byrd.

The Journal of the American Medical Association is almost complete from vol. 27 to vol. 58.

American Journal of the Medical Sciences, vol. 120 to vol. 136, Centralblatt, Originale Band 12 to Band 65, almost complete, Centralblatt Referate, Band 35 to Band 53, almost complete, Annales de L'Institut Pasteur, Tome 18 to Tome 23, almost complete, British Medical Journal, from 1907 to 1911, Hygienic Laboratory Bulletins, Nos. 2 to 63, Journal of Infectious Diseases, vol. 2 to vol. 10, Journal of Hygiene, vol 6 to vol. 11, Lancet, (London), 1878 to 1912, almost complete, Tropical Medicine and Hygiene, vol. 10 to vol. 13, Medical News, vol. 82 to vol. 84. Parasitology, vol. 1 to vol. 4, Journal of Pathology and Bacteriology, vol. 11 to vol. 15, Public Health Reports and papers, vol. 1 to vol. 33, almost complete, American Journal of Public Hygiene, vol. 18 to vol. 20, Weekly Public Health Report, vol. 2 to vol. 27, almost complete, Zeitschrift f. Hygiene u. Infektionskrankheiten, Band 70 to Band 73, Transactions of the Florida Medical Association, from 1888, complete, Annual Report State Board of Health of Florida, complete, Wellcome Research Laboratory Reports, 1904 to 1911, Sanidad y Beneficencia, complete.

There has been constructed an especially arranged magazine stand for the current numbers of the periodicals, with storage space underneath, so that all numbers of volumes can be kept

together until completed, when they are sent to the binder. When bound they are classified, marked, cataloged, etc., and arranged in the bookcases. Owing to crowded quarters there has not been much effort made to get complete sets of many of the journals, but now that the library is assuming order I shall make an effort to complete as many of the files as possible. Beginning with 1914 I shall index all the original articles in the journals, so that the information in the current numbers will be as easily found as in complete volumes.

In November I wrote to fifty health authorities of the United States asking for any back reports of the State Boards of Health and monthly bulletins. I received forty-one answers. Some merely stated that the supply was exhausted, but that the library would be placed on their permanent mailing list for all future publications. Several secretaries or libraries sent in all back numbers that could be spared, thus marking some of our files of reports complete, or nearly so.

There are a great many duplicate pamphlets, reports and bulletins on hand. A list of these and the numbers needed to complete our files will be made during the coming year, when medical librarians will be asked for exchanges.

Respectfully,
F. DOMARIS HERNDONE,
Librarian.

**SUBSIDIARY
STATISTICAL DATA**

HYDROPHOBIA.

Treatment Administered for its Prevention by the State Board of Health, During 1913.

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Pasteur Treatment		Liability
									Begun	Ended	
335	6 M*		Jacksonville	Bite	Leg	-----	Dog	Negri bodies	Dec.	26 Jan.	16 Indigent
336	5 F*		Jacksonville	Bite	Stomach	-----	1 Dog	Negri bodies	Jan.	5 Jan.	26 Indigent
337	5 M		Lakeland	Bite	Face and hand	Jan.	12 Dog	Negri bodies	Jan.	15 Feb.	4 Indigent
338	Ad M		Okahumpka	Bite	Hand	Jan.	11 Dog	Negri bodies	Jan.	16 Feb.	5 Pay case
339	Ad M		Cocoa	Bite	-----	-----	Dog	Negri bodies	Feb	3 Feb.	22 Pay case
340			Cocoa	Bite	-----	-----	Dog	Negri bodies	-----	-----	-----
341			Cocoa	Bite	-----	-----	Dog	Negri bodies	-----	-----	-----
342	14 M		Tampa	Bite	Face	-----	Dog	Clinical	Fet	3 Feb.	22 Pay case
343	8 F*		Jacksonville	Bite	Ear and hand	Feb.	2 Dog	Negri bodies	Feb.	6 Feb.	26 Indigent
344	2 M		Ybor City	Bite	Head and face	Feb.	3 Dog	Clinical	Feb	8 Feb.	28 Pay case
345	16 M		Jacksonville	Bite	Hand	Feb.	7 Dog	Clinical	Feb.	10 March	2 Indigent
346	9 M		Jacksonville	Bite	Calf leg	Feb.	18 Dog	Negri bodies	Feb.	21 March	13 Indigent
347	4 M		Jacksonville	Bite	Chest	Feb.	18 Dog	Negri bodies	Feb.	21 March	13 Indigent
348	21 M		Bartow	Bite	Arm and hand	Feb.	19 Dog	Negri bodies	Feb.	22 March	14 Pay case
349	Ad M		Jacksonville	Bite	-----	-----	-----	Clinical	Feb.	23 March	15 Pay case
350	8 F		Gainesville	Bite	Left ear	Feb.	20 Dog	Negri bodies	Feb	26 March	18 Pay case
351	4 M		Tampa	Bite	Thumb	Feb.	26 Dog	Negri bodies	March	1 March	21 Pay case
352	4 F		Tampa	Bite	Wrist	Feb.	26 Dog	Negri bodies	March	1 March	21 Pay case
353	7 M		Tampa	Bite	Hand	Feb.	26 Dog	Clinical	March	2 March	22 Indigent
354	37 M		Green Cove Springs		Left arm	Feb.	18 Dog	Negri bodies	March	5 March	25 Pay case
355	Ad F*		Tampa	Bite	-----	-----	Dog	Clinical	March	6 March	26 Indigent
356	6 M*		Tampa	Bite	-----	-----	Dog	Clinical	March	6 March	26 Indigent

357	7 M*	Tampa	Bite	-----	-----	-----	Dog	Clinical	March	6 March	26 Indigent
358	35 F	Jennings	Bite	-----	-----	Arm	March 3 Dog	Negri bodies	March	8 March	28 Pay case
359	6 F	Tampa	Bite	-----	-----	Arm	March 6 Dog	Negri bodies	March	9 March	31 Indigent
360	7 M	Mayo	Bite	-----	-----	Hand	-----	Negri bodies	March	13 April	2 Indigent
361	Ad M	Live Oak	Bite	-----	-----	Leg	-----	Clinical	March	21 April	10 Indigent
362	39 M	Parish	Scratch	-----	-----	Finger	March 19 Cow	Clinical	March	23 April	12 Indigent
363		Key West	Bite	-----	-----	-----	Dog	Clinical	-----	-----	Indigent
364	44 M	Jacksonville	Bite	-----	-----	Hand	March 21 Cat	Clinical	March	23 April	12 Pay case
365	6 M	Jacksonville	Bite	-----	-----	Leg	March 19 Cat	Negri bodies	March	23 April	12 Indigent
366	F*	Jacksonville	Bite	-----	-----	-----	Dog	Negri bodies	-----	-----	Indigent
367	Ad M	Jacksonville	Bite	-----	-----	Finger	March 23 Dog	Clinical	March	26 April	15 Indigent
368	Ad M	Jacksonville	Bite	-----	-----	Hand	March 23 Dog	Clinical	March	26 April	15 Indigent
369	11 M*	Jacksonville	Bite	-----	-----	Hand	-----	Negri bodies	March	26 April	15 Indigent
370	13 M	Jacksonville	Bite	-----	-----	Hand	March 23 Dog	Clinical	March	26 April	15 Indigent
371	32 M	Jacksonville	Bite	-----	-----	Thumb	-----	Negri bodies	March	27 April	16 Indigent
372	Ad M*	Jacksonville	Bite	-----	-----	-----	Dog	Clinical	-----	-----	Indigent
373	7 M	Tampa	Bite	-----	-----	Left side	March 26 Dog	Negri bodies	March	31 April	20 Pay case
374	28 M	Tampa	Bite	-----	-----	Half leg	March 28 Dog	Negri bodies	April	3 April	24 Pay case
375	Ad M*	Tampa	Bite	-----	-----	Hand	April 1 Dog	Negri bodies	-----	-----	Pay case
376	57 M	Tampa	Bite	-----	-----	Hand	April 1 Dog	Negri bodies	-----	-----	Pay case
377	6 M	Jacksonville	Bite	-----	-----	Right thigh	April 3 Dog	Negri bodies	April	5 April	27 Indigent
378	12 M	Tampa	Bite	-----	-----	Leg	March 31 Dog	Negri bodies	April	5 April	25 Indigent
379	30 M	Jacksonville	Bite	-----	-----	Finger	April 3 Dog	Negri bodies	April	6 April	26 Indigent
380	50 F	Tampa	Bite	-----	-----	Finger	April 7 Dog	Negri bodies	April	10 April	30 Pay case
381	5 M	Tampa	Bite	-----	-----	Finger	March 13 Dog	Clinical	April	10 April	30 Pay case
382	26 M	Bartow	Bite	-----	-----	-----	Dog	Negri bodies	April	11 May	1 Pay case
383	35 M*	Jacksonville	Bite	-----	-----	Left leg	April 15 Dog	Negri bodies	April	14 May	4 Indigent
384	4 F*	Jacksonville	Bite	-----	-----	Eyebrow	April 15 Dog	Clinical	April	16 April	18 Indigent
385	3 F	Jacksonville	Bite	-----	-----	Finger	April 14 Dog	Negri bodies	April	17 May	7 Pay case
386	4 F	Jacksonville	Bite	-----	-----	Left hand	April 14 Dog	Negri bodies	April	16 May	7 Indigent
387	14 F*	Jacksonville	Bite	-----	-----	-----	Dog	Negri bodies	April	18 April	24 Indigent
388	27 M	Tampa	Bite	-----	-----	Right hand	April 15 Dog	Negri bodies	April	21 May	11 Pay case
389	22 M	Jacksonville	Bite	-----	-----	Thigh	April 20 Dog	Clinical	April	23 April	25 Indigent
390	8 M	Bowling Green	Bite	-----	-----	Right arm	April 20 Dog	Negri bodies	April	27 May	17 Pay case
391	10 M	Bowling Green	Bite	-----	-----	Toe	April 20 Dog	Negri bodies	April	27 May	17 Pay case
392	71 M	Ehren	Bite	-----	-----	Finger	April 15 Dog	Negri bodies	April	27 May	17 Pay case

HYDROPHOBIA—(Continued).

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Treatment		Liability
									Begun	Ended	
393	45	F	Ehren	Bite	Finger	April	12 Dog	Negri bodies	April	17	Pay case
394	7	F*	Mayo	Bite	Shoulder	-----	Dog	Clinical	May	25	Indigent
395	9	M	Tampa	Bite	Right eyelid	May	10 Dog	Negri bodies	May	3	Pay case
396	7	F	Gainesville	Bite	Right cheek	May	15 Dog	Negri bodies	May	10	Pay case
397	35	M	Gainesville	Bite	Buttox	May	24 Dog	Negri bodies	May	17	Pay case
398	30	M	Miccosukee	Bite	-----	May	26 Cat	Clinical	June	21	Indigent
399	20	M*	Jacksonville	Bite	Finger	May	23 Dog	Clinical	June	23	Indigent
400	Ad	M*	Jacksonville	Bite	Hand	May	28 Dog	Clinical	June	24	Indigent
401	6	F	Daytona	Bite	Leg	May	28 Dog	Negri bodies	June	25	Pay case
402	6		Alachua	Bite	Leg	-----	Dog	Negri bodies	June	26	Pay case
403	35	M	Newberry	Bite	Hand	June	4 Dog	Negri bodies	June	2	Indigent
404	35	M	Jacksonville	Bite	Left leg	-----	Dog	Clinical	June	2	Indigent
405	23	M	Jacksonville	Bite	Calf leg	June	10 Dog	Negri bodies	June	5	Pay case
406	Ad	M*	Jacksonville	Bite	Right hand	June	12 Dog	Negri bodies	June	5	Indigent
407	8	F	Tampa	Bite	Leg	June	20 Dog	Negri bodies	June	16	Indigent
408	28	M*	Gainesville	Bite	Thumb	June	21 Dog	Negri bodies	June	16	Indigent
409	49	M	Tampa	Bite	Leg and hand	June	25 Cat	Clinical	July	22	Indigent
410	27	M	Jacksonville	Bite	Finger	June	29 Cat	Negri bodies	July	22	Pay case
411	10	F	Jacksonville	Scratch	Left hand	June	28 Cat	Negri bodies	July	22	Indigent
412	4	M	Gainesville	Bite	Ear	July	4 Dog	Negri bodies	July	29	Indigent
413	9		Sanford	Bite	-----	-----	Dog	Negri bodies	July	30	Pay case
414	6	M	Jasper	Bite	Thumb	July	6 Dog	Negri bodies	July	4	Pay case
415	36	M	Jacksonville	Bite	Hand and leg	July	12 Cat	Negri bodies	July	16	Indigent
416	26	M*	Gainesville	Bite	Finger	July	17 Dog	Negri bodies	July	19	Indigent

417	7 M	Jacksonville	Bite	Left leg	July	9 Cat	19 Aug.	8 Indigent
418	34 F	Jacksonville	Sore	Thumb	Aug.	16 Man	20 Sept.	9 Pay case
419	36 M	Jacksonville	Sore	Hand	Aug.	16 Man	23 Sept.	12 Pay case
420	27 M	Jacksonville	Scratch	Hand	Aug.	16 Man	23 Sept.	12 Unsettled
421	17 M	Jacksonville	Bite			Cat	27 Sept.	16 Pay case
422	Ad F	Jacksonville	Bite		Aug.	23 Cat	27 Sept.	16 Pay case
423	50 M	Tampa	Bite	Hand		Dog	31 Sept.	20 Pay case
424	14 M	Pavoretta	Bite	Right arm	Sept.	1 Dog	6 Sept.	26 Indigent
425	54 M	Jacksonville	Bite	Left leg	Sept.	10 Dog	15 Oct.	6 Indigent
426	33 F	Jacksonville		Eye		Man	17 Oct.	7 Pay case
427	55 F	Jacksonville	Sore	Hand	Sept.	22 Dog	24 Oct.	14 Pay case
428	4	Laurel Hill	Bite	Knee	Sept.	19 Dog	22 Nov.	11 Indigent
429	26 M*	Starke	Bite	Hand	Oct.	26 Horse	29 Nov.	18 Indigent
430	35 M*	Starke	Bite		Oct.	26 Horse	Oct.	27 Indigent
431	8 M	Orlando	Bite	Thumb	Oct.	26 Squirrel	1 Nov.	21 Pay case
432	11 F*	Jacksonville	Bite	Ankle		Dog	5 Nov.	25 Indigent
433	39 M	Jacksonville	Bite	Left thumb	Nov.	2 Dog	6 Nov.	28 Indigent
434	60 M	Bronson	Bite	Leg	Nov.	14 Dog	17 Dec.	7 Pay case
435	12 F	Live Oak	Bite	Finger	Nov.	14 Dog	20 Dec.	10 Pay case
436	3	Cedar Keys	Bite			Cat	21 Dec.	11 Unsettled
437	45 F	Live Oak	Bite	Finger		Dog	23 Dec.	13 Indigent
438	2 F	High Springs	Bite			Cat	30 Dec.	20 Pay case
439	19 M	Jacksonville	Bite	Finger	Nov.	16 Cat	30 Dec.	20 Pay case
440	8 M	Tampa	Bite	Left arm	Dec.	2 Dog	6 Dec.	26 Pay case
441	25 M*	Wauchula	Bite	Calf leg	Dec.	27 Dog	31	Indigent

*Negroes

EXPLANATORY NOTES:

- Case 340: Patient left State before first dose arrived; treatment cancelled.
- Case 341: Patient left State before first dose arrived; treatment cancelled.
- Case 342: It was not known at first that dog had bitten anyone. However, child was reported to have been bitten after head had been microscopically examined with negative report, and destroyed, thus too late for animal inoculation.
- Case 363: Treatment was discontinued upon investigation by State Health Officer. Dog not rabid.
- Case 366: Did not report for treatment. Cancelled.
- Case 372: Did not report for treatment.
- Case 375: Ran away when first dose arrived. Cancelled.
- Case 376: Refused treatment when first dose arrived. Cancelled.
- Case 384: Treatment ordered owing to location of wound, but dog did not show symptoms of rabies afterward. Treatment cancelled.
- Case 387: Patient did not report for full treatment. Cancelled.
- Case 389: After biting, dog disappeared. Treatment was ordered. About 4 days later dog returned to its owner. Treatment was then cancelled.
- Case 395: Patient died with symptoms of hydrophobia. (See Case No. 2, of Deaths.)
- Case 411: In this case examination was made of brain of companion cat. Cat which scratched patient died.
- Case 418: Patient attended case of hydrophobia and administered cold cloths to patient's mouth. Sore on thumb believed to have been infected.
- Case 419: Partly healed over sore on hand believed to have been infected when attending man with hydrophobia.
- Case 420: Scratch received when attending man with hydrophobia
- Case 426: Received saliva in eye, from human patient having hydrophobia, while nursing.
- Case 427: Sores on hand infected from saliva of dog.
- Case 430: Upon further investigation it was found treatment not necessary. Cancelled.

CASE RECORD, DEATHS FROM HYDROPHOBIA, 1913.

CASE No. 1. October 17, 1912, Jacksonville, white male child, aged three years, attacked and knocked down by large cur dog running at large. Bitten severely on hand, nose and mouth through palate. Dog killed and head examined by Central Laboratory of the State Board of Health; found positive for rabies. Intensive schema of Pasteur treatment was given 37 hours after receiving bite. From location of bite it was feared child would develop hydrophobia even before treatment was completed but after treatment was completed and some time had elapsed, the physician and parents began to rest easier, hoping he would escape the disease. However, hydrophobia finally developed. Death occurred March 14, 1913, or nearly five months after date of receiving bite. It would appear that wound in this case was too severe and located at too short a distance from the spinal cord and brain to have been overcome by any treatment.

CASE No. 2. May 10, 1913, Tampa, white male child, aged 9 years, bitten under right eyelid by pet dog, one-half inch laceration. Examination of dog's brain was positive for rabies. The dog gave history of having been bitten by a supposedly rabid animal about three weeks prior to May 10. It is stated by neighbors that the dog appeared to be in good health until May 10, when he showed a tendency to attack other dogs, but was still very playful with children. On the afternoon of May 10th he suddenly became vicious, attacking the child above mentioned, tore its eyelid at the inner canthus, after which the dog rushed down the road biting anything. Dog was caught and killed. Number of other dogs and several head of cattle were bitten by this dog. Could learn of no other human. Child received first dose of Pasteur treatment May 14—completed June 3. Attending physician was advised of child's demise 3:30 a. m. June 9, and reached bedside 10 minutes after death, finding him with temperature of 104 and a thick, frothy mucous coming from mouth and nostrils. Parents say he choked to death. Had slight fever day before, but no attention paid to it until 12 o'clock that night, after father had noticed it was very high and child complained of severe cramps in the stomach and a choking feeling, which rapidly grew worse. 135 hours and 30 minutes elapsed from last treatment until death. This appeared to be another case where wound was too close to spinal cord and brain for treatment to be of avail. (Pasteur treatment case No. 395).

CASE No. 3. August, 1913, near Jacksonville, male adult, white, farmer, bit by cur dog—small scratch on hand. Paid no attention to it and did not take Pasteur treatment. Developed hydrophobia a few weeks later, same month. Taken to St. Lukes Hospital, where he died in a few hours with pronounced symptoms of hydrophobia. Microscopical examination of brain showed Negri bodies.

CASE No. 4. August, 1913, Jacksonville, male adult, white, street car conductor, bit by dog. Thought nothing of it and did not take Pasteur treatment. A few weeks later began to develop symptoms of hydrophobia, which became very pronounced and resulted in death September 13th.

CASE No. 5. October, 1913, Jacksonville, male adult, white, employee Armour & Company. Said he had been bitten by a dog some time previous but gave the incident no thought and failed to take Pasteur treatment. Began to develop symptoms and walked to county hospital, where later he became violent and it was found necessary to put him in straight jacket. Like in all other cases, every effort was made to counteract the disease, but death occurred four days and a half after first symptoms. Upon examination of brain Negri bodies were found.

CASE No. 6. December, 1913, Jacksonville, male adult, Syrian, operator of fruit stand. Telephone call to State Board of Health. Dr. Hanson investigated and found evidence of hydrophobia. Patient walked unassisted to St. Luke's Hospital, where the disease rapidly developed. At intervals raving maniac with the most violent symptoms of hydrophobia, followed by exhaustion and death. Microscopical examination of brain showed Negri bodies.

HYDROPHOBIA.

Treatment Administered for its Prevention, by the State Board of Health,
During 1913.

Distribution of Cases by Counties and Towns

County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
Alachua -----		1			2	3	2				1			9
Alachua -----						1							1	
Gainesville -----		1			2	1	2						6	
High Springs -----											1		1	
Newberry -----						1							1	
Baker -----														
Bay -----														
Bradford -----										2				2
Starke -----										2**			2	
Brevard -----		3												3
Cocoa -----		3*											3	
Calhoun -----														
Citrus -----														
Clay -----			1											1
Green Cove Springs -----			1										1	
Columbia -----														
Dade -----														
De Soto -----				2								1		3
Bowling Green -----				2									2	
Wauchula -----												1	1	
Duval -----	2	5	9	8		5	4	5	3		3			44
Jacksonville -----	2	5	9*	8		5	4	5	3		3		44	
Escambia -----														
Franklin -----														
Gadsden -----														
Hamilton -----			1				1							2
Jasper -----							1						1	
Jennings -----			1										1	
Hernando -----														
Hillsborough -----		2	8	7	1	1	1	1				1		22
Tampa -----		2	8	7*	1	1	1	1				1	22	
Holmes -----														
Jackson -----														
Jefferson -----														
Lafayette -----			1		1									2
Mayo -----			1		1								2	
Lake -----	1													1
Okahumpka -----	1												1	
Lee -----														
Leon -----						1								1
Miccosukee -----						1							1	
Levy -----											2			2
Bronson -----											1		1	
Cedar Keys -----											1		1	

HYDROPHOBIA.—(Continued).

County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
Liberty -----														
Madison -----														
Manatee -----			1										1	1
Parish -----			1										1	
Marion -----														
Monroe -----			1										1	1
Key West -----			1**										1	
Nassau -----														
Orange -----											1		1	1
Orlando -----											1		1	
Osceola -----														
Palm Beach -----														
Pasco -----				2									2	2
Ehren -----				2									2	
Pinellas -----														
Polk -----	1	1		1									2	3
Bartow -----		1		1									2	
Lakeland -----	1												1	
Putnam -----														
Santa Rosa -----														
Seminole -----							1						1	1
Sanford -----							1						1	
St. John -----														
St. Lucie -----														
Sumter -----														
Suwanee -----			1								2		3	3
Live Oak -----			1								2		3	
Taylor -----														
Volusia -----						1			1				2	2
Daytona -----						1							1	
Favoretta -----									1				1	
Wakulla -----														
Walton -----										1			1	1
Laurel Hill -----										1			1	
Washington -----														
Totals -----	4	12	23	20	4	11	9	6	4	3	9	2	107	107

*Cocoa, 2 cases ordering Pasteur treatment left State before first doses arrived. Jacksonville, 2 patients ordering Pasteur treatment did not appear for its administration. Tampa, 2 patients ordering Pasteur treatment refused treatment upon its arrival.

**Starke, 1 case never received treatment, as it was later found unnecessary. Key West, treatment never administered, as it was later ascertained that dog was not rabid.

DISTRIBUTION OF VACCINE POINTS, 1913

County	January	February	March	April	May	June	July	August	September	October	November	December	Total
Alachua	140	630	1080	280	110	230	20		30		20		2540
Baker													
Bay													
Bradford	10	30	10	520	40					20			630
Brevard	10	30				80		20		20			160
Calhoun			20							30	10		60
Citrus		20		30		30							80
Clay				40									40
Columbia			110		20		20						150
Dade		100		150	310								560
DeSoto													
Duval	395	85	165	135	90	35	5	20	52	266	790	176	2214
Escambia	4850	1000		200		50		30					6130
Franklin													
Gadsden	50	50	50	50	50		50	100		200			600
Hamilton			20	30	60		20	20	40			24	214
Hernando			10										10
Hillsboro	30	150	70	275	320	70	140		30	90	100		1275
Holmes		10			10								20
Jackson					50								50
Jefferson	80			60									140
Lafayette													
Lake			30	80									110
Lee							50						50
Leon	100	30		50		100	50						330
Levy		40	190	20	20	30	30						330
Liberty					70								70
Madison		40	50		40		40						170
Manatee	20	130	130	50	100	20	50						500
Marion		30	1290	185		10		10					1525
Monroe						20						50	70
Nassau		20											20
Orange	30	30	20		30			10					120
Osceola		10	60										70
Palm Beach								30					30
Pasco			10	20									30
Pinellas	50		50			20	100					10	230
Polk	70	20	180			80	90		20	10	60		530
Putnam	260		20		180	10							470
Santa Rosa	40		30										70
Seminole													
St. Johns	70	60	10	20	130	10					60	120	510
St. Lucie			20	50		10							80
Sumter			20										20
Suwanee				20									20
Taylor		50	20										70
Volusia		30	10								10		50
Wakulla													
Walton		50											50
Washington													
Totals	320	2645	3675	2265	1630	805	665	240	172	636	1080	380	20398

REPORTED CASES OF SMALLPOX IN FLORIDA, 1913

County	January	February	March	April	May	June	July	August	September	October	November	December	Total	Deaths
Alachua	11	17	11	2	1	9		9		13	1	1	75	1 (B)
Baker														
Bay														
Bradford		1		9						9	1		20	
Brevard					1	3		1		1			6	
Calhoun			6								1		7	
Citrus				1		7							8	
Clay														
Columbia			4				2						6	
Dade		1		4	2			9					16	
DeSoto														
Duval	21	25	29	19	37	18	38	3	4	15	6	13	228	2 (B)
Escambia	182	137	127	59	20	11	8	3	3	1	1		552	
Franklin														
Gadsden														
Hamilton														
Hernando			1										1	
Hillsboro	4	1	1			6	3		1	3		3	22	
Holmes														
Jackson						1							1	
Jefferson	8			2									10	
Lafayette														
Lake														
Lee							1	3					4	
Leon		4		3		3							10	
Levy		10	2	3	2	1							18	
Liberty														
Madison		1											1	
Manatee	5	6	3	3	10	11	1				2		41	
Marion		1	2	2	1							1	7	1*(W)
Monroe														
Nassau		1											1	
Orange	1		4										5	
Osceola			2										2	
Palm Beach			1										1	
Pasco	1		1										2	
Pinellas	1		5		1	1				3	5		16	
Polk			1		1	4	8			8			22	
Putnam	6	1	1		5	4	4	1					22	
Santa Rosa	2	2	10	1	1		1						17	
Seminole														
St. Johns	4	2	3	5	11	6	5						36	
St. Lucie			2		1	2							5	
Sumter			1			1							2	
Suwanee										1			1	
Taylor		1											1	
Volusia														
Wakulla														
Walton														
Washington														
Totals	246	211	217	113	94	88	71	29	8	54	17	18	1166	4

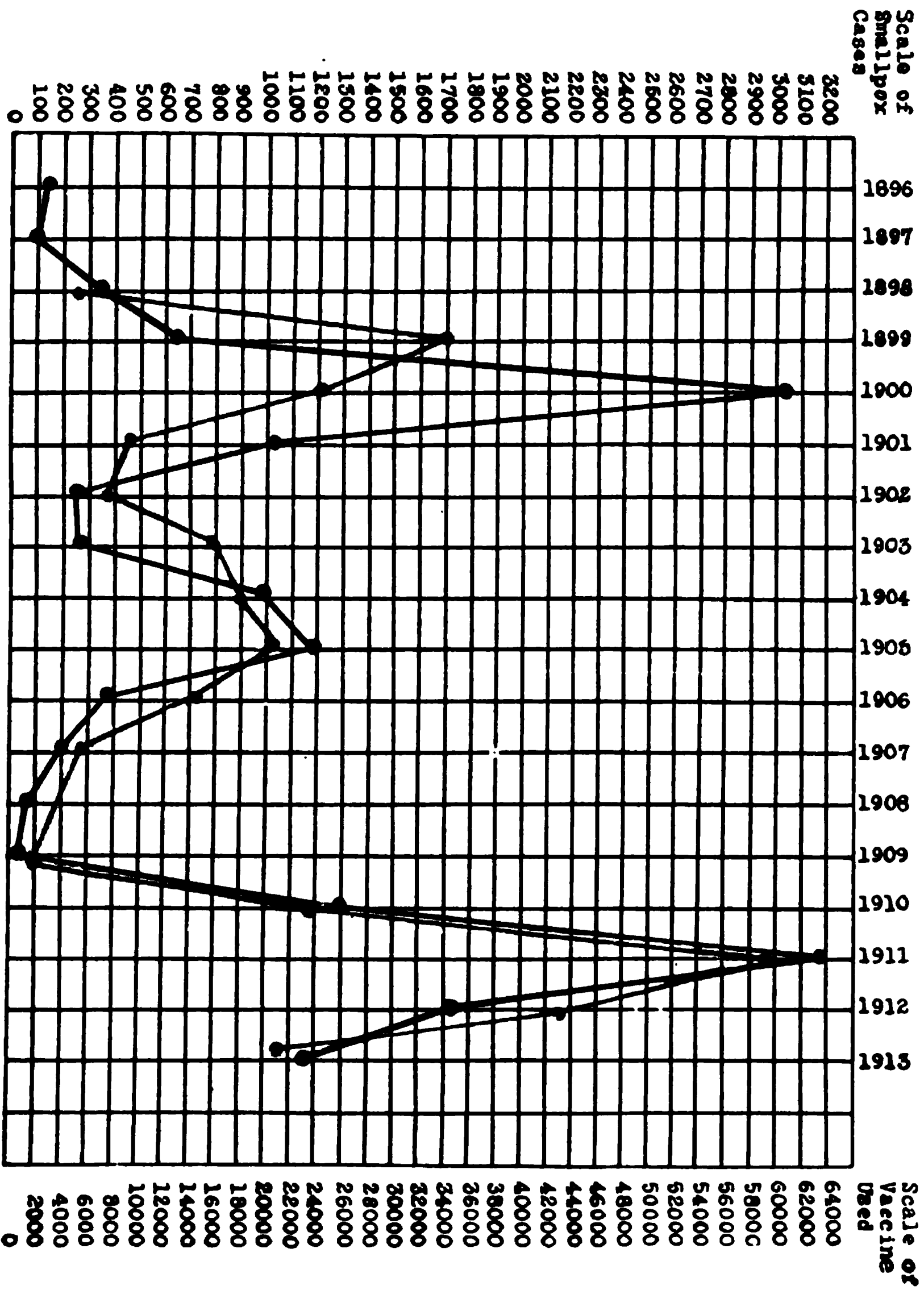
*Hemorrhagic smallpox.

EXPLANATION OF THE ACCOMPANYING CHART:

The black lines in chart on opposite page represent the number of cases of smallpox reported to the State Board of Health by years, from 1896 to 1913.

The red lines represent the number of vaccinations done by years—1896 to 1913.

PREVALENCE OF SMALLPOX IN FLORIDA, 1896 to 1913.



PREVALE

County	JANUARY					FEBRUARY					MARCH				
	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm
Alachua		3	1	1	5	1	1	1		4			3		2
Baker															
Bay					1										
Bradford		2			1		1	1		1	1	2	1		
Brevard			1		2							2	2	1	
Calhoun					1					1					1
Citrus					2					1					1
Clay							1								
Columbia							1				1		1		3
Dade					1							2			
DeSoto	2	3	2		3		3	1		3			1		
Duval	14	3	23	5	23	14	5	19	11	27	14	3	13	5	32
Escambia		1	3	2	6	8	2	6	15	8	5	3	6		3
Franklin		1			1							1			
Gadsden				1	4					1			1		1
Hamilton					5										
Hernando										1			1		
Hillsboro	12	44	25	24	15	13	24	9	26	27	18	27	17	5	18
Holmes					1										
Jackson		1	1	9					2	1					
Jefferson															
Lafayette					2										
Lake			2		3					1		1			1
Lee			1					1			1	2			
Leon			3		2	3	7	1		5	2	2			7
Levy				1						4					1
Liberty		1													
Madison								1							
Manatee			2		4			1		3			2		2
Marion					5		1	2		2	1	2			1
Monroe			1		1										
Nassau					1					1					
Orange			3		1	2	2	2		1	1	4	1		4
Osceola								1		1			1		2
Palm Beach			1	1	2		1		5	2				4	
Pasco		2				1	1						1		1
Pinellas			4	2	1	3	1				1		2	1	1
Polk	1				3		5	2		4	1		3		5
Putnam					2			1		1			2		1
Santa Rosa							2					1			1
Seminole				1	5					2					8
St. Johns									1	1					
St. Lucie			1	1						5			1		5
Sumter	1				1		2					2	1		
Suwanee		1			3					3					46
Taylor															1
Volusia		1	2		2		5	2	1	2	1	1			5
Wakulla															
Walton			1		1					2					
Washington					1										
Totals	30	63	77	48	111	45	65	51	61	115	47	55	60	16	153

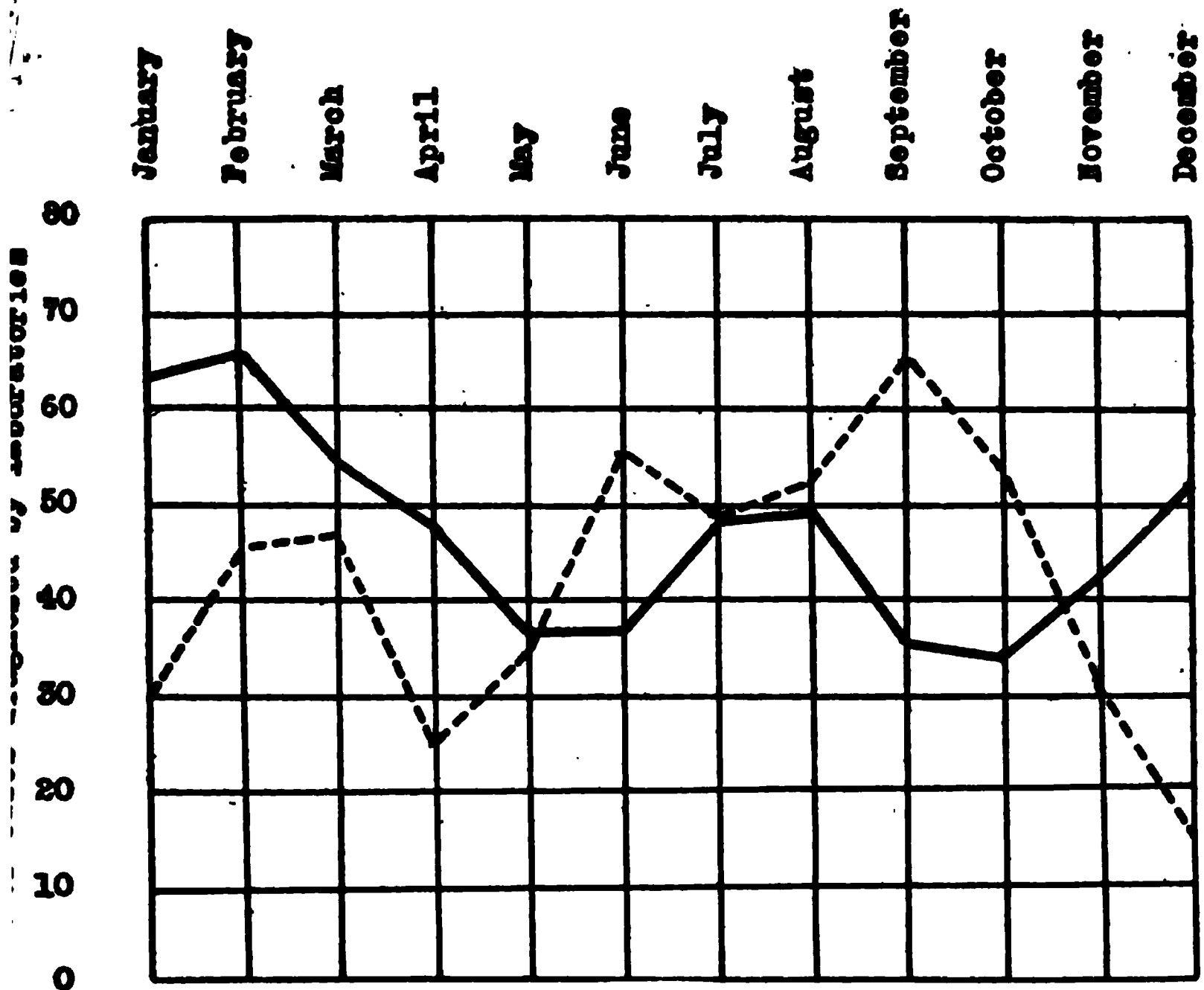
on the Seasonal Prevalence of Typhoid Fever and Malaria as Diagnosed
by the Laboratories of the State Board of Health

with

Report Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida,
by J. R. Watson, Entomologist, Florida Agricultural
Experiment Station

and

Climatological Data Compiled by A. J. Mitchell, Section Director,
U. S. Weather Bureau.



PREVALENCE OF TYPHOID AND MALARIA AS DIAGNOSED BY
LABORATORIES OF THE STATE BOARD OF HEALTH, 1913

PART 1.

Solid line indicates prevalence of typhoid
Broken line indicates prevalence of malaria

Statement Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida, by J. R. Watson, Entomologist, Florida Agricultural Experiment Station.

In answer to an inquiry by the office, Mr. Watson gives the following:

FLIES.

Your letter reached me this morning. I have no detailed statistics concerning the seasonal prevalence of flies in Florida. However, I can supply, from my own observation, I believe, the gross facts of the case. Flies, here at Gainesville, at least, are apparently much worse during the winter than during the summer provided the weather is not too cold. I should say they reached their maximum in April and possibly extending into May, with a marked decrease as soon as the rainy season sets in, and then slowly rising during the winter. Of course they are not abroad much when the weather is too cold but warm spells of some weeks duration in the winter, such as we had last winter, will bring them out. The rapid decrease of their numbers in the summer is due to their fungus parasites, which, as in the case of whitefly and scale insects, become very fatal to them at that time. Probably too, the heavy rains wash out their breeding places and perhaps have some effect upon their numbers in that way.

This tabulation is a thing that ought to be done, and I believe I shall endeavor to devote a little more time and attention to it than I have heretofore, so that I may have some more detailed statistical information.

MOSQUITOES.

Concerning mosquitoes, I have no definite information on hand now except, of course, the general knowledge that their time of greatest abundance is during the latter part of the rainy season when they have had time to breed all summer. I should say September is the time of the greatest abundance. My assistant, Mr. Loftin, made his thesis on this subject last year. I believe we can obtain from him other detailed statistics on these points as he kept a great many mosquito traps and kept tab on the number of mosquitoes caught each day. I know there was a marked change in the species of mosquitoes caught. *Anopholes* were most abundant in September and October whereas *Culex* predominated in his traps in the early part of the summer. I will look up his thesis and if the details are not given there I will write to him and obtain them so far as possible for you.

* * * * *

In further answer to your recent inquiry concerning mosquitoes, I submit the following: Mr. Loftin, who took his master's degree here last year, worked on mosquitoes as his thesis subject. Incidentally with this work he had a series of traps and he kept accurate records of the catch from September to May inclusive. Below I am giving results of the catches in two of his traps situated at a distance of something over half a mile apart in either direction from the campus. You will notice the two traps agree closely as to the date of the greatest abundance and the following are averages for

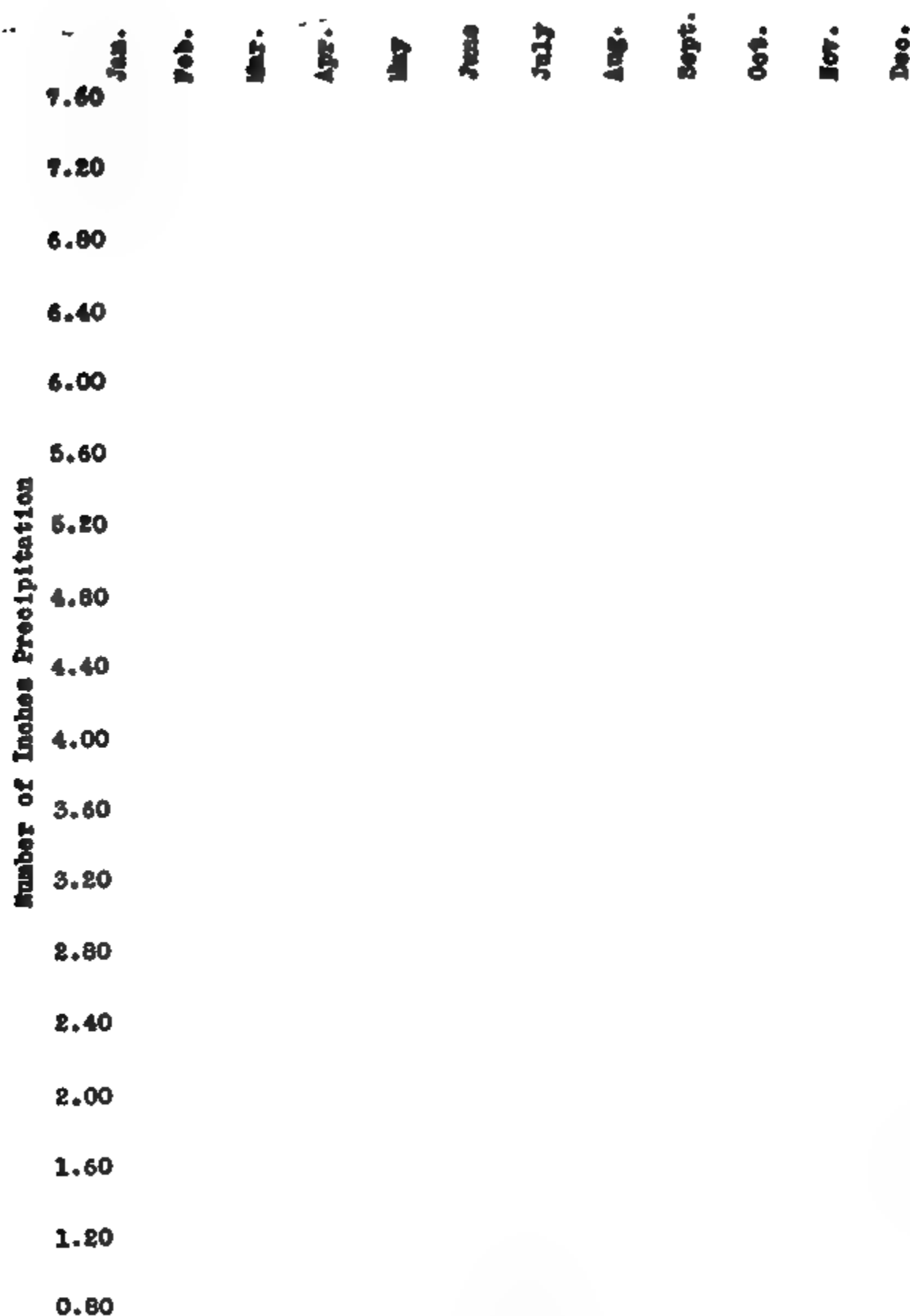
each night for the month. The actual catch varies so from night to night due to temperature, etc., that the averages are much safer.

1912		1913	
September	-----21.30.1	January	-----1215
October	-----44.278.7	February	-----14.525
November	-----14.323.2	March	-----31.149
December	-----14.232	April	-----12.230
		May	-----10.522.3

You will notice from this that October was by all means the month of most numerous mosquitoes. In quoting from memory in my last letter I believe I stated it to be September. You will notice that the amount caught that month was considerably more than twice the average number. Both traps seem to agree in having a secondary climax in March, which, after October, was the month of most numerous catch of mosquitoes in the traps.

Mr. Loftin states that *Culex quinquefasciatus* made up 98.22 per cent. of the total number caught. The others were *Anopheles crucians*, and *A. quadrimaculatus*, with an occasional *Stegomyia* and *Psorophora*. Mr. Loftin in his recent letter, did not supply me with the date as to when the *Anopheles* became most abundant but, quoting again from memory, I am under the impression that it was later. I know at least that later in the year in November or December *Anopheles* was relatively much more abundant in proportion to *Culex* than in September. It is to be regretted that the records are not available for June, July and August, but quoting again from my own observations I would say that during those months their numbers compared pretty closely with those for September with the exception of June, which is probably lower.

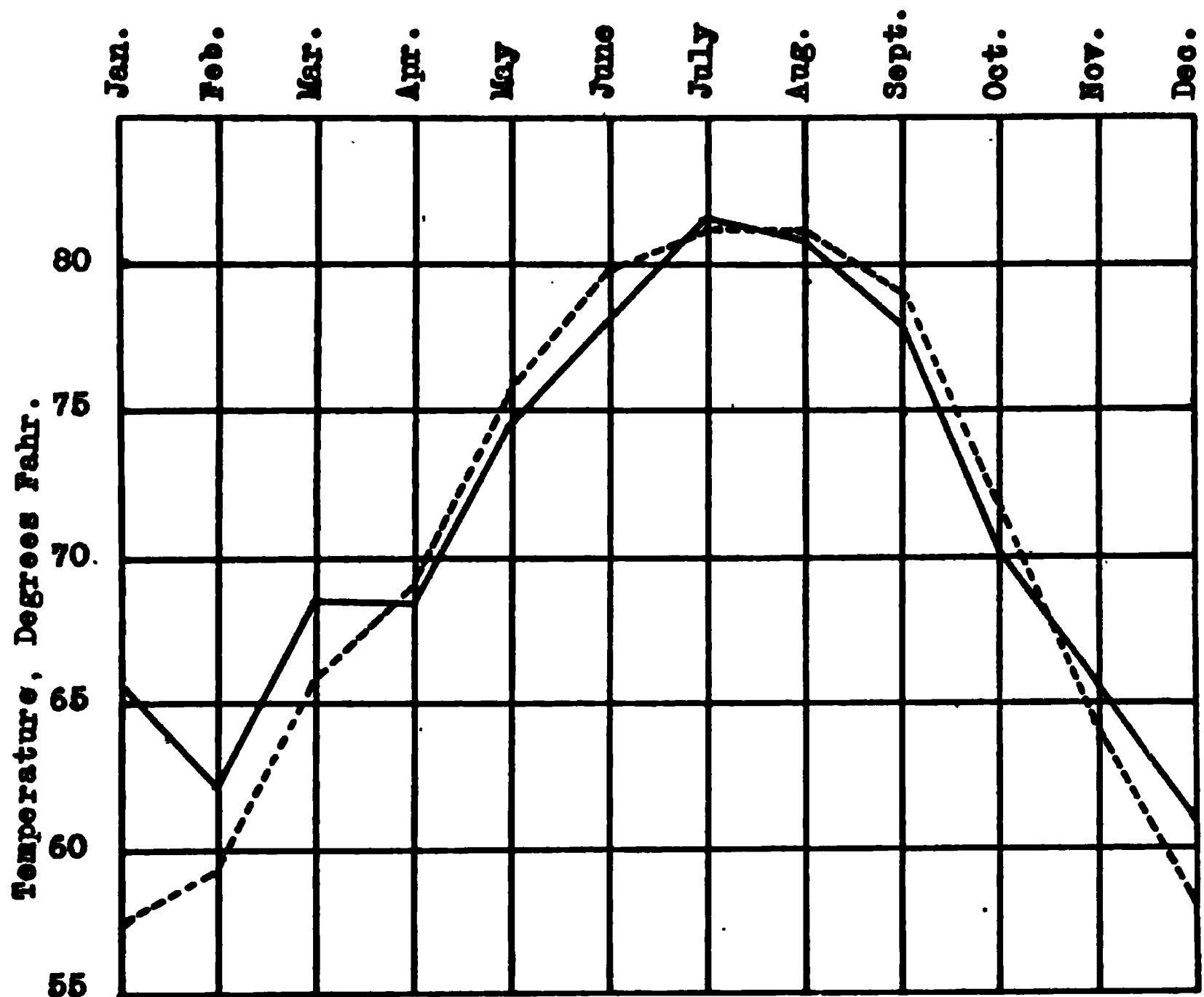
The following climatological charts and table were supplied by Mr. A. J. Mitchell, Section Director of the U. S. Weather Bureau, Jacksonville, Fla.



MONTHLY NORMAL AND MEAN PRECIPITATION, FLORIDA.
1913

CHART 2.

Solid line indicates mean precipitation.
Broken line indicates normal precipitation



MONTHLY NORMAL AND MEAN TEMPERATURES, FLORIDA, 1913

CHART 3. Solid line indicates mean temperature
Broken line indicates normal temperature

MONTHLY SUMMARY, 1913

Month	TEMPERATURE				PRECIPITATION		AVERAGE NO. DAYS				WIND Prevailing Direction
	State Average	Departure from Normal	Highest	Lowest	State Average	Departure from Normal	Rainv .01 or more	Clear	Partly Cloudy	Cloudy	
January -----	65.6	*8.2	90	30	1.91	†1.04	6	15	10	6	SE
February -----	62.1	*2.2	90	28	4.78	*1.60	9	11	9	8	NE
March -----	68.5	*2.4	91	32	5.43	*2.52	12	10	12	9	NE
April -----	68.4	†1.1	93	38	2.02	†0.59	4	20	7	3	SE
May -----	74.4	†1.3	100	47	3.16	†0.98	7	17	10	4	E
June -----	78.1	†1.4	103	50	5.28	†2.17	10	13	12	5	SE
July -----	81.7	*0.7	104	61	5.36	†1.94	12	12	16	3	SE
August -----	80.7	†0.5	101	62	6.87	†0.53	14	9	16	6	SE
September -----	78.0	†1.1	98	41	5.89	†1.42	11	12	12	6	E
October -----	70.2	†2.3	98	31	2.91	†1.11	5	19	7	5	NE
November -----	65.7	*0.9	89	25	1.04	†1.30	4	14	11	5	NE
December -----	61.1	*2.2	85	23	3.37	*0.71	8	12	10	9	NE

*Above.

†Below.

PREVAL.

County	JANUARY					FEBRUARY					MARCH				
	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm	Malaria	Typ. Fever	Tuberc.	Diph.	H'worm
Alachua		3	1	1	5	1	1	1		4			3		2
Baker															
Bay					1										
Bradford		2			1		1	1		1	1	2	1		
Brevard			1		2							2	2	1	
Calhoun					1					1					1
Citrus					2					1					1
Clay							1								
Columbia							1				1		1		3
Dade					1							2			
DeSoto	2	3	2		3		3	1		3			1		
Duval	14	3	23	5	23	14	5	19	11	27	14	3	13	5	32
Escambia		1	3	2	6	8	2	6	15	8	5	3	6		3
Franklin		1			1							1			
Gadsden				1	4					1			1		1
Hamilton					5										
Hernando										1			1		
Hillsboro	12	44	25	24	15	13	24	9	26	27	18	27	17	5	18
Holmes					1										
Jackson		1	1	9					2	1					
Jefferson															
Lafayette					2										
Lake			2		3					1		1			1
Lee			1					1			1	2			
Leon			3		2	3	7	1		5	2	2			7
Levy				1						4					1
Liberty		1													
Madison								1							
Manatee			2		4			1		3			2		2
Marion					5		1	2		2	1	2			1
Monroe			1		1										
Nassau					1					1					
Orange			3		1	2	2	2		1	1	4	1		4
Osceola								1		1			1		2
Palm Beach			1	1	2		1		5	2				4	
Pasco		2				1	1						1		1
Pinellas			4	2	1	3	1				1		2	1	1
Polk	1				3		5	2		4	1		3		5
Putnam					2			1		1			2		1
Santa Rosa							2					1			1
Seminole				1	5					2					8
St. Johns									1	1					
St. Lucie			1	1						5			1		5
Sumter	1				1		2					2	1		
Suwanee		1			3					3					46
Taylor															1
Volusia		1	2		2		5	2	1	2	1	1			5
Wakulla															
Walton			1		1					2					
Washington					1										
Totals	30	63	77	48	111	45	65	51	61	115	47	55	60	16	153

EVALE:

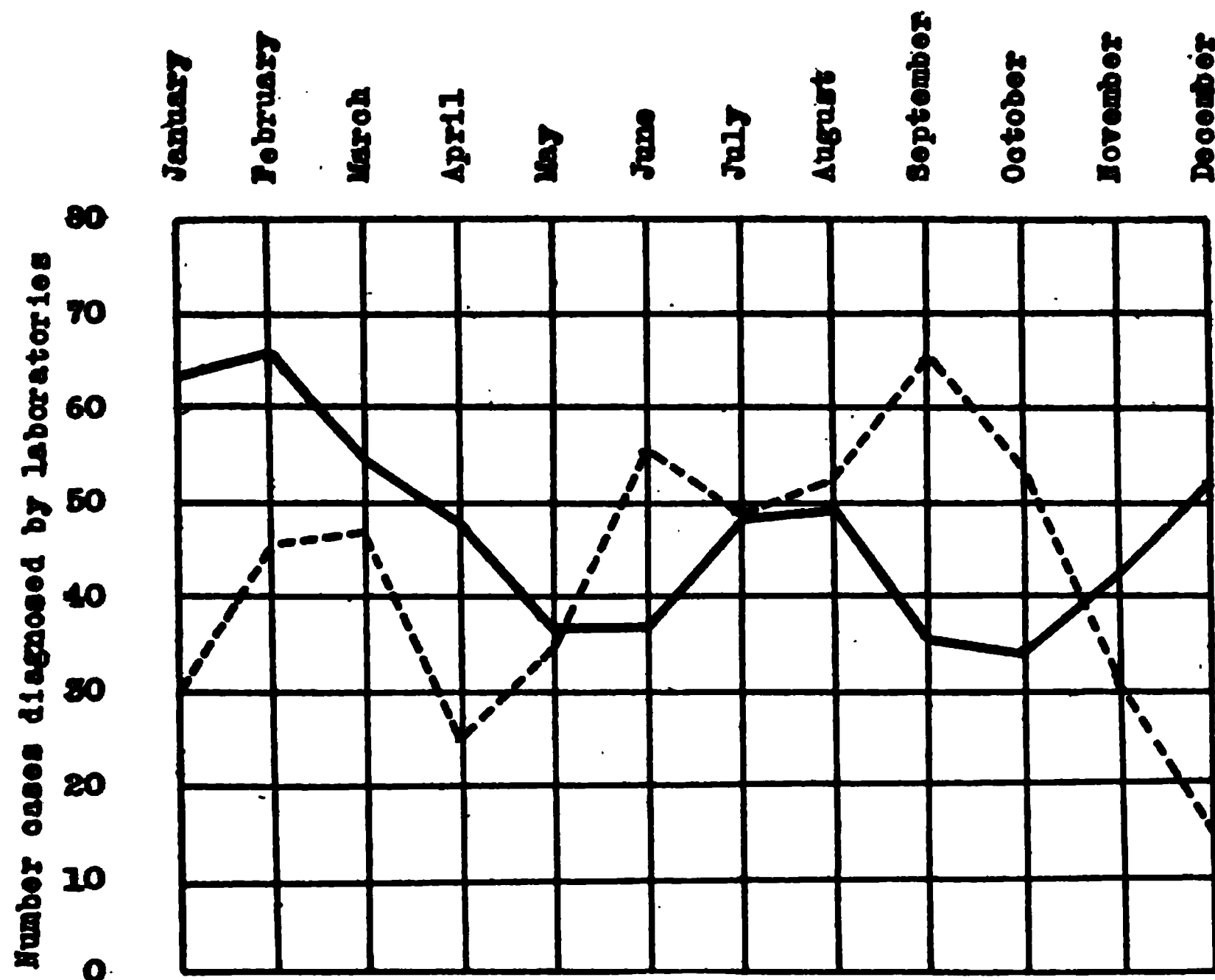
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STATE BOARD OF HEALTH OF FLORIDA

65

Diph.
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1

A Study in the Seasonal Prevalence of Typhoid Fever and Malaria as Diagnosed
by the Laboratories of the State Board of Health
with
Statement Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida,
by J. R. Watson, Entomologist, Florida Agricultural
Experiment Station
and
Climatological Data Compiled by A. J. Mitchell, Section Director,
U. S. Weather Bureau.



PREVALENCE OF TYPHOID AND MALARIA AS DIAGNOSED BY
LABORATORIES OF THE STATE BOARD OF HEALTH, 1913

CHART 1.

Solid line indicates prevalence of typhoid
Broken line indicates prevalence of malaria

REPORT OF DR. CHARLES WM. BARTLETT

SOUTHWESTERN DISTRICT

Tampa, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—In making my annual report this year, I have to deal, during the first half of the year, with Hillsborough County, and especially Tampa, and for the last half of the year, in addition to Tampa and Hillsborough County, with the counties of Pinellas, Polk, Manatee, DeSoto, and Lee, all of which I have visited as Assistant to the State Health Officer.

The information relative to conditions in the various counties has been obtained by personal interviews with the leading physicians in the principal towns.

Physicians of this section do not report all the cases of infectious diseases coming under their care, but by examining the laboratory records, as they avail themselves extensively of this privilege, a fair idea of the conditions prevailing, may be obtained. In proof of this statement, I find that the data given me by the physicians in the different counties corresponds very closely to the specimens submitted to the laboratory for examination.

The number of typhoid and diphtheria cases taken from our records may be considered as approximately the number of cases that have occurred, as hardly a case of either of these diseases comes under a physician's charge in our days, without specimens being sent to the laboratory.

The contagious diseases prevailing in Tampa during the year 1913 have been typhoid fever, diphtheria, smallpox and scarlet fever. We began the year with forty cases of typhoid fever, and it continued semi-epidemic until April, when it dropped from nineteen to four cases. Comparing the typhoid cases of the entire year, we find about the same number as in 1912. As a matter of fact

we had one case more in 1913. On the other hand, if we take the last half of the year, although there has not been a remarkable increase in any given month, the number of cases has been larger—sixty-three for 1913 and forty-eight for the same period of 1912. In 1912 there was an increase from four cases in November to twenty-nine in December, which increase continued to April, as above stated. We are closing the year 1913, with eight cases only, as against forty cases at the same period of last; and it seems, judging from the last few years, that this is the month when we were in danger of the typhoid increase. Therefore, such a decrease during this period of 1913 may indicate that we are going to have very few cases during the year 1914.

The condition, reported in previous years, about the Seventh Avenue road going to Gary, has been greatly improved, as the parallel open ditch, where the peddlers used to wash vegetables sold in Tampa, has been covered.

As a whole, typhoid has not been as prevalent in my district this year as formerly.

Simply the collection, without individual study, of a number of cases of typhoid fever, will not give any information as to the cause and prevention of the same. This being true, during the last half of the year 1913, thirty-eight cases have been thoroughly investigated by myself and the Sanitary Patrolman of Hillsborough County, and we found about 73 per cent. (27 cases) living in unscreened houses. This does not cover the whole number of cases exposed to fly infection. Out of eleven screened houses having typhoid fever patients, six of the patients took meals away from home. Therefore, about 88 per cent. of the typhoid cases investigated were, practically speaking, people who live in unscreened houses. We failed to ascertain in this investigation how many of the screened houses destroyed the fly after it once obtained admission, but this data will be collected in the investigations made for 1914.

Out of eleven screened houses, eight had open closets within twenty-five feet of their premises; and eleven of the total of thirty-eight cases, had previous cases of typhoid in the neighborhood. Twenty-eight cases had open closets within five hundred feet.

Investigating the food supply, we found that among twenty-eight patients taking milk, the name of the same dairyman appeared

only twice. This seems to prove that infection cannot be attributed to milk. The raw food consumed by these thirty-eight patients was practically negligible, and apparently would not be a possible focus of infection.

The part played by lack of proper sewerage connections can be seen from the location of the cases as outlined below:

Four cases in Tampa proper, sewerage connection.

Four cases in Hyde Park, sewerage connection.

Six cases in Tampa Heights and Ybor City, sewerage connection.

Twenty-four cases in Northwestern Tampa, principally open closets.

As stated above, the larger number of cases occurred in the northwestern part of the city, where open closets are the rule, and sewerage connections the exception. There were approximately ten open closets within five hundred feet of each case of typhoid. It is well to call attention to the fact that Hyde Park, where only four cases have been reported during the last six months, suffered severely in the winter of 1911.

From the report submitted by Glenn Smith, Registrar of Vital Statistics, we find that nine deaths were due to typhoid fever during the last six months of 1913. This will seem a large percentage of deaths to the sixty-three reported cases, but in searching the death records, we find that only two of the cases had been reported to this office. The death certificate of one reads, "Typho-Malaria Fever," and the remaining six cases seem to have been diagnosed clinically. This difference between the number of cases reported and the number of death certificates has been noted, and the physician at fault has been notified of his failure to report these cases in the past, and warned as to the future.

As reported to you in the early part of the year, we have tried to induce the city authorities to have open closets screened, but this has not been done, because of the expectation of having a sewerage system built. Another effort will now be made to induce such screening, as the prospect for sewerage connection for the outside districts where typhoid seems to have been prevailing, is not bright at present.

Smallpox has been present during the year 1913, not only in Hillsborough County, but in every county I have visited. The total number of cases treated at the Isolation Hospital is 63; 35 white

and 28 colored people. August and September were the only two months free from smallpox. The largest number was in February, when we had fifteen cases. The number of people vaccinated by me is 652; vaccinated by physicians in Tampa and outside districts, 323, making a total of 975 vaccinations during the year 1913. One hundred vaccine points have been laid aside as old ones. The applications for vaccination have been less this year than any other. The reports I have received from the different counties have been given in a general way, but I believe reports of this disease are made to the Jacksonville office.

The smallpox situation has been thoroughly covered in my reports of same from time to time during the year, and our tribulations in the vaccination line have been so often dwelt upon, that I deem it unnecessary to go into details here.

Diphtheria has prevailed through South Florida, I have been informed, more than ever before, and certainly so in Tampa, which would indicate that the reports are true. Although there has never been an extensive epidemic, we have had more cases than ever before. I have been keeping careful count for the last four months of the year, that is, during school term, and find that we have had not less than 92 cases in Tampa, West Tampa, and surrounding country—80 cases within the city limits, 5 in West Tampa, and 7 in the outside district. The largest number of cases for any one month occurred in November, when there were 26 cases; 19 for September, 24 in October, and 23 in December. All cases have been thoroughly investigated and an epidemic guarded against, by going to the patient's house, and by writing personal letters to the principal of the school attended by infected children.

The majority of physicians now treating cases of diphtheria submit release cultures for examination before discharging their patients. Most of them submit only one release culture, and I would here recommend that the physicians be compelled to secure two negative reports before allowing the patient to return to school.

In my inspection trips to the different parts of South Florida I have always made inquiry as to the prevalence of pellagra, and although the information has been meagre as to the exact number of cases, I usually find two or three, and it seems to be on the increase throughout this section. Personally, no case has come under my observation during the year. The two cases of pellagra

reported to me from Manatee County are claimed to have been imported from North Carolina.

LaGrippe prevailed in Tampa during the last three weeks of the year, being more severe among the children, and producing cases of bronco-pneumonia from which there have been several deaths.

No cases of measles have been reported during the year, and only nine cases of scarlet fever.

Under the "Public Nuisance Act" all sanitary nuisances reported to this office have been easily adjusted, the only exception being the dumping grounds at Fort Myers, which is still pending.

Every cigar factory, public building, station, court house, etc., have been well posted on matters of health, in reference to the fly-borne diseases and tuberculosis, by the fly and tuberculosis banners distributed. The literature received from headquarters has been distributed through the city, by requesting the placing of same in packages at the leading stores, and also requesting the distribution of banners on a given day by the drivers of bakery and milk wagons.

I want to call attention to the fact that our Isolation Hospital is not screened, and would recommend the screening of doors and windows in said institution.

The following is a review of health conditions in the Southwestern District for the year 1913, by counties:

DE SOTO COUNTY.

A most excellent healthy condition prevailed in DeSoto County during the year 1913. There were a few cases of typhoid fever reported from Wauchula and Arcadia. Also hookworm and pellagra were reported from this section, but only in a very small amount.

HILLSBOROUGH COUNTY.

The health conditions of Hillsborough County during the year 1913 were good, as there were no large epidemics. The principal diseases prevailing through this county were smallpox, which prevailed through the whole year excepting two months; typhoid fever, which appeared in considerable number of cases during the

early part of the year, beginning to diminish during the month of April; malaria, which prevailed through the year in small amount, but undoubtedly is disappearing from this section, as the number is much less than it used to be five or six years ago; diphtheria, coming next to typhoid in number of cases, a few cases having prevailed almost continuously through the year; lagrippe, of which an epidemic prevailed in Tampa during the month of December and in the surrounding territory; and last, scarlet fever, scattering cases of same having been reported from different sections of the county during the year.

LEE COUNTY.

During the early part of the year several cases of smallpox prevailed in this county among the negro population around Fort Myers. Hookworm and typhoid cases also appeared in small number. Taken as a whole, the health conditions were exceedingly good for the year 1913, no real epidemics of any kind prevailing.

MANATEE COUNTY.

Smallpox prevailed through this section around Palmetto during the latter part of the summer, and at Terra Ceia during the winter. A few scattering cases of diphtheria at Palmetto and Manatee were also reported. The section of Sarasota, in this county, was in very good health condition throughout the year. Typhoid fever was reported less throughout this section than in any other county in this district.

PINELLAS COUNTY

The condition of health of Pinellas County has been exceedingly good during the year 1913. A few cases of smallpox were reported from St. Petersburg, and two cases from Tarpon Springs; in these cases the patients drove to Hillsborough County to receive treatment at the Isolation Hospital of the State Board of Health. There were also reported a few cases of typhoid and malaria in St. Petersburg during the year.

POLK COUNTY.

Polk County held the second place to Hillsborough County as far as the number of cases of infectious and contagious diseases reported is concerned; but having less population and better conditions, of course, less number of cases occurred than in Hillsborough. Lakeland had a small outbreak of diphtheria just before the opening of public schools, and during the latter part of the year; a few cases of typhoid fever also occurred in this county. Hookworm has been reported from different sections of the county during the year, and also pellagra.

Respectfully submitted,

CHARLES WM. BARTLETT,
Assistant to the State Health Officer.

REPORT OF DR. C. W. D'ALEMBERTÉ

WESTERN DISTRICT.

Pensacola, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla :

DEAR DOCTOR:—I beg to enclose my report covering a period from June 12th, 1913, to December 31st, 1913, together with a brief comment on the health conditions which have prevailed in my district during this period of time.

Yours very truly,

C. W. D'ALEMBERTE,
Assistant to the State Health Officer.

COMMUNICABLE DISEASES. REPORTED FROM JUNE 12TH TO DECEMBER 31ST, 1913.

Disease	No. Cases
Smallpox -----	17
Tuberculosis -----	33
Typhoid Fever -----	16
Diphtheria -----	13
Scarlet Fever -----	3
Measles -----	1

Total cases June 12, to Dec. 31st-----83

Total cases smallpox reported from Jan. 1st to June 12, 1913 -----522

NUMBER OF FUMIGATIONS BY SANITARY PATROLMAN, FROM JUNE 12, TO
DECEMBER 31, 1913.

Smallpox -----	17
Tuberculosis -----	16
Typhoid fever -----	3
Diphtheria -----	13
Scarlet fever -----	3
Fumigations at Isolation Hospital -----	3

NUMBER OF DEATHS FROM COMMUNICABLE DISEASES, REPORTED FROM JUNE 12,
TO DECEMBER 31, 1913.

Tuberculosis -----	5
Diphtheria -----	3
	<hr/>
	8
Number cases smallpox sent to Isolation Hospital June 12, to December 31, 1913 -----	3
Number cases smallpox sent to Isolation Hospital Jan. 1, to June 12, 1913--	67
	<hr/>
Total -----	70
Number vaccine points furnished physicians upon request from June 12, to December 31, 1913 -----	126
Number transit permits, Form 233 issued from June 12, to December 31, 1913 -----	40
Number issued from Jan. 1, to June 12, 1913 -----	39
	<hr/>
Total for year -----	79

Following instructions of the State Health Officer, on July 20, 1913, accompanied by Dr. F. A. Brink, of the Pensacola laboratory, a trip was made to Holt, Fla., for the purpose of investigating the possible source of infection of typhoid fever patients. After a careful examination, we arrived at the opinion that the disease was transmitted by the house fly, and recommended the screening of closets and the disinfecting of the excreta of the typhoid patients, together with typhoid vaccination.

At the request of the State Health Officer, on August 28th, Dr. Kennedy, a member of the Board, accompanied by Dr. Brink, went to DeFuniak Springs, on August 31st, to confer with Dr. Taylor, in charge of the diphtheria epidemic, I being on my leave of absence at this time. Dr. Kennedy succeeded in having an ordinance passed regulating the reporting of all suspicious cases, and investigated cases at Marianna and Ponce de Leon.

On September 10th, at the direction of Mayor Paul Carter, of Marianna, I visited that city to investigate a case of diphtheria, and to give them some advice on the management and control of epidemic diseases. I was able to have a special meeting of the City Council pass an ordinance creating the office of City Physician, visited Mr. Dickerson, the Registrar, and found his reports to be within ten per cent. of correctness.

On December 16th, also at the direction of the State Health

Officer, I visited St. Andrews, Fla., in company with Dr. Brink, to ascertain the cause of a number of cases of amoebic dysentery. The water supply was found to be good, and the undoubted source of infection was the open surface closet and unscreened houses. Dr. Wells, the physician in charge, was advised of the cause, and he promised to take it up with the owners of the mill to have the closets screened.

SANTA ROSA COUNTY.

Dr. H. Mason Smith, Santa Rosa County, states:

"The general health conditions of Santa Rosa County have been good for the year 1913.

"There has not been an epidemic of any nature during the entire year, and the percentage of communicable diseases has been less than usual.

"There have been a few cases of malaria, all of which have been of a mild type, no malignant or hemorrhagic cases have been seen.

"Typhoid fever has appeared in different parts of the county at various times, but at no time has it spread to any extent. The people in both town and rural districts are screening their homes against flies and mosquitoes more than ever. This has been the result of the educational work of the Health Notes, and in the opinion of the medical men of the county, accounts wholly for the decrease of typhoid and malaria infection.

"A few cases of smallpox were found the first part of the year, but as the sentiment against vaccination has been broken down, enough people were vaccinated to prevent any spread.

"Only two cases of diphtheria appeared. They were sporadic in origin, our county remaining free of the epidemic."

WALTON COUNTY.

Dr. C. B. McKinnon, Walton County, states:

"This year has been extremely healthy throughout the entire county, with the exception of an epidemic of diphtheria, in the latter part of August and first of September.

"There has not, to my knowledge, been one case of typhoid fever in the county during the year.

"Five or six cases of smallpox have been reported from this county.

"I find from inquiry in the malarial districts that there has been a great reduction in the number of cases. I cannot give any reason for the reduction. Hookworm disease is prevalent throughout the county, and there does not seem to be as much effort on the part of the physicians to encourage the treatment of the disease as in the past.

"There is little objection to vaccination among the better class. There are many cases of tuberculosis reported from different parts of the county, and it appears to be on the increase. The local newspapers and Health Notes have done much to bring about better health conditions, in the homes, both in the town and in the country. Many of the homes in the country have built fly-proof privies, and this has had much to do with the decreased amount of typhoid.

"An ordinance has been passed by DeFuniak relative to the reporting of births and deaths, and they have also named the Clerk of the Council as Registrar."

JACKSON COUNTY.

Dr. Theop. West, of Jackson County, states:

"That the consensus of opinion of the physicians with whom he has conversed is that the health of Jackson County has been unusually good.

"There have been no contagious or infectious diseases in the county except a few cases of diphtheria, which yielded very promptly to treatment.

"There has been a very large number of hookworm cases, confined mostly to the rural districts.

"The sanitary conditions of Marianna and other towns and villages of the county are not as good as they should be."

WASHINGTON COUNTY.

Dr. F. C. Wilson, Washington County, states:

"The general health has been exceptionally good in Washington County during the year 1913. No epidemic of any kind has

occurred. Washington County is almost entirely free from contagious diseases. Malaria has been much less prevalent than last year, also very few cases of typhoid fever. Hookworm disease prevails in many localities."

"I find many still inclined to oppose vaccination."

CALHOUN COUNTY.

Dr. B. V. Elmore, Calhoun County, states:

"This year has been an exceptionally healthy one. In fact, we have had no epidemics of any kind. There has been only one case of typhoid fever in Blountstown, that was in 1912.

"I have treated five cases of smallpox during the year, which was all that occurred in this part of the county. I have vaccinated successfully about one hundred people. We have a considerable number of hookworm cases in this county. I would say now about thirty per cent. of the population are affected with this disease."

BAY COUNTY.

Dr. W. G. Mitchell, St. Andrews, Fla., states:

"We have not had an epidemic of any kind whatever. Some few cases of malaria, which have been readily amenable to treatment. We have had one case of diphtheria.

"We have had several cases of amoebic dysentery. Twenty-five per cent. of the inhabitants are infected with hookworms."

Dr. W. G. Lowe, Lynn Haven, Fla., states:

"There are quite a number of hookworm cases in Bay County. There have been about twelve cases of diphtheria during the past year."

ESCAMBIA COUNTY.

Since assuming charge June 12th, 1913, there have been eighty-three cases of communicable diseases, fifty-five fumigations by the Sanitary Patrolman. Number of deaths from communicable diseases, eight. The number of transit permits issued, seventy-nine; number of vaccine points furnished physicians, one hundred and twenty-six. While the number of smallpox cases sent to

the Isolation Hospital from June 12th to December 31st, 1913, were only three, as compared with the number sent from January 1st, to June 12th, prior to my assuming charge of the office, sixty-seven.

The work of the Sanitary Patrolman has been most efficient; the sanitary condition of the Isolation Hospital is greatly improved. There has been more educational work along hygienic lines in which I have been able to do my part as a member of the Public Health Commission.

Respectfully,

C. W. D'ALEMBERTE,

Assistant to the State Health Officer.

REPORT OF DR. JOSEPH Y. PORTER, JR.

SOUTH TROPIC DISTRICT.

Key West, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I have the honor to report as follows on my work for the period that has elapsed since my appointment as an Assistant to the State Health Officer for the South Tropic District.

August 2, 1913, a reported case of yellow fever at the Louise Maloney Hospital of this city was investigated, a diagnosis of yellow fever having been made by the physician in charge of the case; the case was immediately examined, and a tentative diagnosis of malaria made, which was confirmed within the hour by finding the organism in the blood.

The "garbage dump" matter was repeatedly taken up with the City Council. This place, where all garbage from the city was deposited and burned, for quite a number of years has been a sanitary nuisance, in that it furnished an ideal place for the propagation of flies. The condition of the "pile" is now much better than formerly, and since the time that I last addressed the Council on this matter, the Council has called for bids for a thirty-ton incinerator, which will cover our needs for several years.

The screening laws of which the enforcement has been very lax in the past, are now strictly enforced, numerous violations having been prosecuted in the criminal court; likewise the various laws on sanitary nuisances, etc.

All dairies have been inspected and milk tested, both chemically and bacteriologically; with few exceptions the dairies and surroundings are in a very unsanitary condition. All cattle are tick-infested, and it was endeavored to arouse among the dairymen interest in a dipping vat and to get this island tick free. I regret to state that I have been unable to accomplish anything.

All the physicians of this city have been informed that this office will now make examinations for malaria, typhoid, diphtheria, tuberculosis and intestinal parasites. I regret to state that the examinations made are not so large as they might be.

I have also maintained for several months on the front porch of the office, which is just off the sidewalk, a fly exhibit, wherein were shown the various stages of the fly from the larvae to the full grown fly. This exhibit I am certain accomplished much in an educational way, and should the Council pass anti-fly ordinances, public opinion will be behind the enforcement of the same.

An effort is also being made to collect morbidity statistics from this community, and although all physicians have been seen personally and their help promised, and although stamped post cards supplied to make these reports, the number of cases reported is not what I hoped for, or what it should be.

However, an encouraging feature is that more cases are being reported.

In November, 1913, I had the honor to represent the State Health Officer at the fourth annual meeting of the Association for the Study and Prevention of Infant Mortality, which took place at Washington, D. C. This detail was made the subject of a special report.

I have been unable to inspect the district outside of Key West, with the exception of Long Key, as the majority of places are reached by launch only, and I have been awaiting authority to hire same.

In addition to the above, I have tried to arouse interest in the matter of our high infant mortality, especially that under two years of age, and it shall be my endeavor to have a suitable milk station established, in charge of a competent nurse this coming summer.

The work of the Sanitary Patrolman has been systematized, daily reports now being required of him; in this way more work is covered daily, than formerly.

In the last week of December, 1913, a suspicious case of chickenpox was investigated; after watching the case for two days a definite diagnosis of chickenpox was made.

I am now about to address a communication to the City Coun-

cil looking towards the passage of ordinances for screening of cisterns, fly-proofing of toilets, and the better care of stables. These measures enacted into law and rigidly enforced, will, I feel certain, show a marked reduction in our infant mortality this coming summer.

Respectfully,

JOSEPH YATES PORTER, JR.,
Assistant to the State Health Officer.

REPORT OF DR. W. P. CRIGLER

SOUTH CENTRAL DISTRICT.

Ocala, Fla., January 1, 1914.

DR. JOSEPH. Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I have the honor to herewith hand you a report of the general health conditions existing in the Ocala District during the year, and a resume of my work. The district comprises the counties of Marion, Lake, Sumter, Citrus, Hernando, Seminole, Orange, Osceola, and Pasco.

The general health conditions of the whole district have been good. No epidemics of a serious nature occurred. Malaria, the most prevalent disease, is on the decrease, especially in the larger towns, where prophylactic measures, in the way of screening against the mosquitoes, are better carried out.

Typhoid fever exists in isolated cases throughout the district, but in no instance reaching an epidemic. Most all of the cases were of fly-borne origin. Notwithstanding the great number of open surface closets, and a great number of flies, typhoid is rare.

The communicable diseases of childhood occurred throughout the district, with measles the most predominant. Few cases of mumps, whooping cough and scarlet fever were reported, especially during the school term.

Diphtheria has caused a great deal of anxiety and has existed in a number of places throughout the district. The most virulent cases and those ending fatally, occurred in the rural districts, where an early diagnosis and prompt administration of antitoxin was not obtained. Isolated cases of diphtheria occurred where the origin of the infection was impossible to trace.

Smallpox has at no time reached the stage of an epidemic. It has existed at various points over the district, but by prompt vacci-

nation of the contacts, and all others who would accept it, the spread of the disease was prevented.

A great number of people have been vaccinated during the last two years, and that accounts for the small number of cases reported in this district during the year.

Pellagra is being diagnosed more frequently now than formerly, and cases are being seen by most of the physicians in the district. The opinion of several doctors who have treated the cases claim a relationship between this disease and that of hookworm. One physician reports good results in the treatment by the administration of thymol. It is evidently on the increase.

Epidemics of dengue fever, of a widespread nature, occurred in Sanford and Orlando during the months of August and September. The greater part of the population of these towns were affected. The cases were of a mild nature, and no fatal results were reported.

Hookworm exists as extensively as formerly, and the doctors are treating a great many cases. The greater number of cases occur in the rural districts, and are generally too poor to come to the physician for treatment.

A few cases of anterior poliomyelitis are reported.

I have made two inspection tours of my district, and visited the most important places. I also assisted in establishing the Registrar of Vital Statistics in the towns of Ocala, Sanford, Orlando and Kissimmee.

MARION COUNTY.

The health conditions as a whole have been satisfactory. Malaria is less prevalent than formerly, especially in the larger towns, due to better screening of the residences. Typhoid fever has existed, but at no time reaching an epidemic. One death from small-pox occurred in Ocala, but no other cases followed. Few cases occurred in the county during the year.

Sporadic cases of diphtheria occurred. Also, a few cases of measles, mumps, and whooping cough. Two cases of infantile paralysis are reported.

Hookworm cases exist in the county, but not a great many come to the physician for treatment.

Four cases of pellagra, with fatal terminations, came to my knowledge during the year. Complaints are made by some of the physicians of the great amount of cocaine and narcotic drugs that are being used by the negroes in the county. It can be easily obtained in a large number of places. Some better way to prevent the sale of the drugs is advocated.

CITRUS COUNTY.

No epidemics of a serious nature have existed in this county during the year. Malaria has been very persistent, and prevailed over the greater part of the year. Cases have a tendency to chronicity. A number of cases of amoebic dysentery have occurred without a known source of infection. Dr. Miller, of Inverness, reports excellent results in the treatment of the disease by hypodermic injection of emitin. No smallpox has been reported. Very few cases of typhoid fever existed. Some cases of dengue were reported. The doctors interviewed reported cases of pellagra. None of the communicable diseases of childhood were reported. Hookworm exists in the county, but the doctors are not treating a great number of cases.

HERNANDO COUNTY.

This county has been in a healthy condition and free from any epidemics. Malaria prevails, but is on the decrease. Four cases of diphtheria occurred. No typhoid, scarlet fever, or smallpox were reported. Hookworm cases are plentiful in the rural districts.

LAKE COUNTY.

The health conditions have been good during the year. The Tertian and aestivo autumnal type of malaria prevail. Diphtheria existed in the county to the extent of eight to ten cases. One case of typhoid fever occurred at Leesburg. No epidemic of the communicable diseases of childhood existed.

SUMTER COUNTY.

This county has been free from epidemics of any magnitude. Ten cases of typhoid fever occurred in and around Bushnell. The inhabitants of Webster were attacked with measles in February. Malaria prevails in the same degree as formerly, but no malignant types are reported. Hookworm cases are numerous throughout the county, but are not coming to the physicians for treatment, unless it exists in a severe form. The towns of Coleman and Wildwood had a few cases of diphtheria during the fall and winter. No smallpox is reported.

SEMINOLE COUNTY.

A widespread epidemic of dengue fever visited Sanford during August and September. A large number of cases occurred. No fatal results were reported. Twenty-eight cases of smallpox occurred in Sanford during the year. Malaria is on the decrease, especially in the larger towns. Three or four cases of typhoid and a few cases of diphtheria existed.

ORANGE COUNTY.

Malaria is decreasing in this county. Few cases of typhoid occurred, but at no time reaching an epidemic. No smallpox, owing to the great number of vaccinations two years ago. A widespread epidemic of dengue fever occurred in Orlando during the fall, affecting the greater part of the inhabitants. Mumps, measles, and whooping cough existed during the winter. Two cases of diphtheria were reported.

OSCEOLA COUNTY.

The county has been free from any serious outbreak of diseases. Little malaria occurred here, and only a few cases of typhoid fever. Two cases of smallpox occurred in Kissimmee during the year. Chickenpox and a few cases of measles were reported. The hookworm conditions are bad, especially around Bassinger,

forty miles from Kissimmee. All the children in this section are victims of this disease, and are in such a poor financial condition as not to be able to obtain treatment. A free dispensary in this section would do a lot of good. Two cases of pellagra were reported.

PASCO COUNTY.

This county has been free from any epidemics of any kind, and the general health conditions are good. Little malaria exists, and only a few cases of typhoid. Two cases of diphtheria, and some cases of scarlet fever were reported from Dade City. Smallpox existed in a turpentine camp ten miles from Trilby. Diphtheria occurred at Trilby in the fall.

Respectfully submitted,

W. P. CRIGLER,

Assistant to the State Health Officer.

REPORT OF DR. J. E. TAYLOR

WEST CENTRAL DISTRICT

Jacksonville, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I beg to append hereto my report for the half year I have been with the Board.

From the 1st to the 15th of July I was in the central laboratory in Jacksonville. This laboratory work proved of the greatest value to me, as, in addition to becoming somewhat familiar with the workings and policy of the Board, it enabled me to place before the physicians and public generally the extreme value of our laboratories and the high class of work done in them.

From July 15th, at which time I was ordered to Tallahassee to take charge as Assistant to the State Health Officer of the Tallahassee Sanitary District, until August 25, I remained in Tallahassee (headquarters for my district), becoming acquainted with the physicians and conditions of that vicinity. On August 26th I started on the quarterly visit over my district, but on the same day was ordered by telegram to DeFuniak Springs to assist in handling an epidemic of diphtheria at that place. A report of the DeFuniak Springs detail is hereto attached and made a part of this report. On September 20th I returned to Tallahassee, where I remained until September 24th, on which day I left for Apalachicola in connection with vital statistics and sanitary work in that city. I returned to headquarters on September 26th and remained there until September 29th, when I was called to Hosford in connection with scarlet fever. A report of this detail is hereto attached. I returned to headquarters on October 1st and remained there until October 3rd, when I visited Quincy in connection with vital statistics. From October 8th to October 20th was spent in the quarterly visit over

my district. A report of the sanitary conditions and health of the various communities covered on this visit is attached. From October 20th to November 6th was spent in my office in Tallahassee. On November 6th I visited Quincy in connection with an alleged sanitary nuisance. November 7th to 11th was spent in Tallahassee. November 11th I left for Jacksonville to take the examination for license to practice medicine in the State of Florida, returning on November 14th. From November 14th to December 2nd, at headquarters. On December 2nd I visited Quincy in connection with vital statistics. December 3rd to 10th was spent in Apalachicola in connection with sanitary improvements in that city. While on this visit I addressed the City Council on the necessity of some method of controlling flies. The Council complimented this address by passing an ordinance requiring that all privies be made fly-proof, and suggested its willingness to carry out any plan I might have towards improving sanitary conditions. With this active co-operation, I feel that some telling work can be done there during the ensuing year. From December 12th to 31st I was on duty in the Executive Office, Jacksonville.

In conclusion, I wish to express my appreciation of the manner in which the Executive Office and laboratories have seconded all my efforts. To this co-operation is due, in no small part, all the success that has attended my work.

Respectfully submitted,

J. E. TAYLOR,

Assistant to the State Health Officer.

SUMMARY OF WORK AND DETAILS FROM JULY 1ST TO DECEMBER 31ST, 1913.

J. E. TAYLOR, M. D., ASSISTANT TO THE STATE HEALTH OFFICER.

Date and Place	Occupation
July 1-15—Jacksonville	Work in laboratory
July 15-Aug. 25—Tallahassee (headquarters)	Office
August 25—Monticello	Quarterly visit
Aug. 26-Sept. 20—DeFuniak Springs	Diphtheria*
September 20-24—Tallahassee	Office
September 24-26—Apalachicola	Vital statistics and sanitation
September 27-29—Tallahassee	Office
Sept. 29-Oct. 1—Hosford	Scarlet fever*
October 1-3—Tallahassee	Office
October 3—Quincy	Vital statistics
October 4-8—Tallahassee	Office

October 8-20—Traveling	-----Quarterly visit*
Oct. 20-Nov. 6—Tallahassee	-----Office
November 6—Quincy	-----Sanitary nuisance
November 7-11—Tallahassee	-----Office
November 11-14—Jacksonville	-----Examination for license
Nov. 14-Dec. 2—Tallahassee	-----Office (Diphtheria in college)
December 2-3—Quincy	-----Vital statistics
December 3-10—Apalachicola	-----Sanitation
December 11—Tallahassee	-----Office
December 12-31—Jacksonville	-----Duty Executive Office

*Detailed report attached.

REPORT OF AN EPIDEMIC OF DIPHTHERIA AT DEFUNIAK SPRINGS.

J. E. TAYLOR, M. D., ASSISTANT TO THE STATE HEALTH OFFICER.

Tallahassee, Fla., September 24, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—In compliance with telegram which reached me in Monticello, I immediately left for DeFuniak Springs, arriving there the afternoon of August 26th.

Immediately upon my arrival, and before the clinical diagnosis of diphtheria had been confirmed by laboratory report on specimens submitted, I suggested to the Mayor that a special meeting of the Town Council be called in order that such steps might be taken as were deemed necessary for the control of the epidemic. This meeting was called at 9 o'clock in the morning of the 27th. All the resident physicians were present at this meeting, but there was some difference of opinion as to the diagnosis. All, however, agreed that the disease was epidemical in nature, and that steps should be taken to limit its spread. Along this line, and at the suggestion of the physicians, the Council passed an ordinance isolating all cases of sore throat with membrane, and creating a Board of Expert Inspectors. The duty of this Board was practically that of a City Board of Health. This board was composed of myself and Drs. McKinnon and Simmons.

As the disease was spread in practically all parts of the city, and as no one knew who had been exposed and who had not, the Council also required in this ordinance that all public drinking cups,

soda-fountain glasses, cups, spoons, etc., be immersed in a solution of bichloride of mercury before re-using.

At the suggestion of the Board of Expert Inspectors, the moving picture theatre closed, and all gatherings, such as Sunday School, etc., were discontinued.

As to the source of the epidemic, I was able to gather the following facts: On or about August 15th, a child of a Mr. Beville was taken ill with what was diagnosed tonsillitis. No laboratory examination was requested. The child died about August 21st. The father of the child is a traveling man, and covers quite a large territory. As to whether the dairyman reported positive by the Pensacola laboratory is responsible for a part of the epidemic: About a month prior to the beginning of the epidemic, this dairyman made a visit North. A rumor, which he denies, states that he had a severe sore throat upon his return. Some twenty of the cases used milk from this dairy; however, the Beville child did not. Of the twenty cases using milk from this dairy, some were exposed to the Beville child and some not. Ice cream made of milk furnished by this dairy was eaten at Freeport, a town twenty miles away. One case developed in Freeport on Monday following the eating of this ice cream on Friday night. Two visitors from Pensacola ate of this ice cream, and subsequently developed diphtheria. The case at Freeport denies any other exposure whatever. About three weeks after the beginning of the epidemic, the sister of this dairyman developed diphtheria. She resides with the dairyman, and had not been away from home for six weeks.

The mortality was low, only three deaths being reported during the epidemic, and one about two weeks after I left. One of these deaths occurred before the administration of antitoxin. The next two were cases that had developed five and seven days before the administration of antitoxin. The first death evidently was due to toxemia; however, this death took place prior to my arrival. The second was due to toxemia, and the third and fourth to acute nephritis. It is interesting to note that the fourth case of nephritis, with subsequent death, developed three weeks after the case had been dismissed.

Fifty-nine cases in DeFuniak Springs and four in the nearby country were reported. Of these, twelve were very serious (four of which died), sixteen moderately severe, and the remainder light.

Of the cases in DeFuniak Springs, laboratory diagnosis was obtained on twenty-four. Of the other four cases, laboratory diagnosis was obtained on three. As gargles and mouth-washes of all descriptions had been used, and as specimens from many were not forwarded, the symptom-complex being classical, I believe that all were diphtheria. The ratio of children to adults was about 6 to 1.

Antitoxin was administered immediately upon diagnosis in doses of five-thousand units to children and ten-thousand to adults. If the symptoms had not materially improved in twenty-four hours, the original dose was doubled. In addition to the antitoxin, soothing gargles were prescribed. These gargles contributed much to the comfort of the patient, as well as lessening, to some extent, the danger of infecting others. As no one knew whether he had been exposed or not, the physicians took the stand that, if there was any question at all, the individual should receive an immunizing dose. It was our experience that an immunizing dose of one-thousand units is decidedly safer than of five hundred.

Yours very truly,

J. E. TAYLOR,

Assistant to the State Health Officer.

REPORT OF SANITARY CONDITIONS OF WEST CENTRAL SANITARY DISTRICT.

J. E. Taylor, Assistant to the State Health Officer.

TALLAHASSEE AND LEON COUNTY.

Malaria less than in several years. No homeglobinuric fever. No smallpox. Community well vaccinated. Hookworm worked by Dr. Diggett two years ago. Three cases diphtheria during the latter part of September and October. Ten cases diphtheria from the middle of October to middle of December in the Florida State College for Women. No other exanthemata. Very little typhoid in the county.

Sewage disposal of Tallahassee by septic tanks. Water supply from deep wells.

Sanitary conditions of Tallahassee fair. Health of community good.

MONTICELLO AND JEFFERSON COUNTY.

Malaria "less than in twenty years." No smallpox. Community fairly well vaccinated. Hookworm situation fair. No exanthemata. No typhoid.

Sewage disposal of Monticello generally by surface privies. Water supply from wells.

Sanitary conditions of Monticello can be improved. Health of community exceptionally good.

Doctors interviewed: Glover, McEachern and Mixon.

MADISON AND MADISON COUNTY.

Malaria about as usual. No exanthemata. Well vaccinated. Hookworm situation could be better. No typhoid. Several cases pellagra.

Sewage disposal in business section by flushing toilets, generally by surface privies. Water supply from wells.

Sanitary conditions fair. Health of community good.

Doctors interviewed: Yates, Davis and Ruter.

PERRY AND TAYLOR COUNTY.

Malaria less than usual. No exanthemata. Poorly vaccinated. Hookworm situation very bad. No typhoid.

Sewage disposal by flushing toilets and surface privies. Water supply from wells. Sanitary conditions of Perry good. Health of community fair.

Doctors interviewed: Weeks, Culpepper, Tyson and Collins.

QUINCY AND GADSDEN COUNTY.

Malaria less than usual. Two cases diphtheria during fall. No other exanthemata. No typhoid. Hookworm situation fair. Well vaccinated.

Sewage disposal: The city has a system of sewers, but on account of a defect in its charter cannot enforce the ordinance re-

quiring sanitary water closets. This will probably be remedied soon. Water supply from wells.

Sanitary conditions of Quincy are bad. Health of community fair.

Doctors interviewed: Davis, Godard, Whittle and Mack.

HOSFORD AND LIBERTY COUNTY.

Considerable malaria. One case of scarlet fever the latter part of September. No other exanthemata. Poorly vaccinated. Hookworm condition very bad. Considerable typhoid during the year. Approximately one hundred cases pellagra in the county.

Sewage disposal by surface privies. Water from shallow wells.

Sanitary conditions of Hosford very poor. Health of community bad.

Doctors interviewed: Tatom and Rhoden.

APALACHICOLA AND FRANKLIN COUNTY.

Malaria somewhat less than usual at this season of the year. No exanthemata. Fairly well vaccinated. No typhoid. Hookworm situation fair.

Sewage disposal largely surface privies. Water supply from wells.

Sanitary conditions of Apalachicola poor, but I feel that during the coming year conditions will be greatly bettered. Along this line, at the last meeting of the City Council, an ordinance was passed requiring that all surface privies be made fly-proof. Health of community fair.

Doctors interviewed: Ferris, Weems and Murrow.

In conclusion, the health generally in my district is good. Outside of Liberty County, I found very little typhoid for the year. There is more or less pellagra over the entire district. The people are not as well vaccinated as they should be. Hookworm disease will receive a considerable portion of my time during the coming year, as this situation can be materially improved.

Yours truly, J. E. TAYLOR,
Assistant to the State Health Officer.

REPORT OF DETAIL TO HOSFORD—SCARLET FEVER.

J. E. TAYLOR, ASSISTANT TO THE STATE HEALTH OFFICER.

TELEGRAM

Greensboro, Fla., Sept. 29th, 1913.

Health Officer,
Care Dr. Fred Moor,
Tallahassee, Fla.

Scarlet fever reported at Hosford. Citizens here ask investigation and protection.
JAS A. DEZELL, Mayor.

TELEGRAM

Tallahassee, Fla., Sept. 9th, 1913.

Dr. Jos. Y. Porter,
State Health Officer,
Jacksonville, Fla.

Scarlet fever reported Hosford. Leaving on afternoon train to investigate.
J. E. TAYLOR.

Dr. Jos. Y. Porter,
State Health Officer,
Jacksonville, Fla.

Tallahassee, Fla., Oct. 1, 1913.

Dear Doctor:—As per my wire to you of the 29th ultimo, I went to Hosford to investigate the reported epidemic of scarlet fever at that point.

I found only one case of scarlet fever, and the fact that the child began feeling badly in school alarmed the people to such an extent that many left town.

Isolation had been inaugurated before I reached Hosford, and as yesterday was the sixth day since the child was taken ill I expect no further trouble. The family of the child are well to do people, and are assisting the physician in every possible way.

After investigation, I wrote the Mayor of Greensboro advising him of the situation.

Yours very truly,

J. E. TAYLOR,
Asst. to State Health Officer.
Greensboro, Fla., Oct. 2, 1913.

Dr. J. E. Taylor, Tallahassee, Fla.

Dear Sir:—I have just received your letter of the 30th ult. and note contents regarding the case of scarlet fever at Hosford. At the time of wiring to you the report had just reached here and it was reported that the people of Hosford were leaving there and probably some coming here, and the few that heard it were frightened and came to me asking that we quarantine, but I had a talk over the phone with Dr. Godard at Quincy, and he advised me to communicate with you, hence the wire. Dr. Gardner was away at the time, up in Georgia, so we could not confer with him. Had he been here, he could probably have quieted the excitement without further to do.

I wish to thank you for your prompt action. It certainly leaves the impression that we are in no danger of neglect.

Yours very truly,

JAS. A. DEZELL, *Mayor*.

PLANS FOR THE ENSUING YEAR.

WEST CENTRAL DISTRICT.

J. E. TAYLOR, ASSISTANT TO THE STATE HEALTH OFFICER.

It is my intention to use every effort to improve the sanitary conditions of the larger towns. I want to do this for their own benefit, but at the same time, it will set an example for the rural districts.

The campaign against hookworm infection will be actively pursued, and as I do not believe the tremendous economic importance of this disease is as fully appreciated by the laity as it should be, considerable time will be devoted to talks to schools, clubs, etc., on this subject.

An epidemic of malaria in any section of my district will receive the closest possible attention. In this connection, screening against flies and mosquitoes will be urged at all times.

Realizing the great value of vital statistics, sufficient time will be given this work to insure accurate compliance with the plans of the Executive Office.

As vaccination furnishes such a safe, easy and sure insurance against the ravages of smallpox, I shall, at all times, present it to the people of my district.

REPORT OF DR. M. E. HECK

EAST COAST DISTRICT.

St. Augustine, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—As assistant to the State Health Officer, I respectfully submit my report as Medical Officer and Sanitary Agent of the State Board of Health for the East Coast Sanitary District, for the six months I have been with the Board.

On July 2, 1913, I entered upon my duties with the State Board of Health, and from this date until November 3rd, 1913, I was employed, for the greater part of the time, in the laboratory at Jacksonville.

On July 15th I was requested to investigate alleged cases of smallpox at Pablo Beach. On my arrival there I found three cases in a colored family of five persons, the two unaffected persons having been vaccinated two or three years ago.

A case of smallpox on Davis street, beyond the city limits of Jacksonville, was reported on July 18th, and on that date, after seeing the case, I had the patient transferred to the State Isolation Hospital.

On July 28th, I investigated smallpox on King's Road, about six miles beyond Jacksonville city limits. Thirteen cases had broken out in two colored families, only three members of one family escaping, and these I vaccinated. All members of the other family either had the disease at the time of my visit, or had only recently recovered from it. There were no other houses near, so I placarded the two houses, and did not remove the patients to the Isolation Hospital.

August 9th, I was sent to Sebastian, St. Lucie County, to investigate alleged unsanitary conditions due to impure water from the Fellsmere drainage canal emptying into Indian River.

While on this trip to Sebastian I visited Roseland, a village some two miles away, for the purpose of investigating an epidemic of malaria. This epidemic evidently started from an imported case, thus demonstrating again that the *Anopheles* must be infected before they are a menace to the public. Screening and bars were urged on the people as the proper method of prevention.

On August 16th I visited St. Augustine, where I called on the Mayor, the various physicians, and the City Health Officer, Dr. A. W. Underwood, in an effort to arouse greater interest in the subject of vital statistics.

St. Augustine has an ordinance requiring the reporting of all births and deaths to the City Health Officer. The ordinance provides further that the City Health Officer shall make reports monthly to the State Board of Health in accordance with rules of said Board. There is no penalty clause attached to this ordinance, but I feel that from this time forward returns for St. Augustine will be sent in promptly.

August 18th, I went to Palatka, where I interviewed the physicians, and several members of the City Council. Here I noticed some indifference on the part of some physicians and Councilmen, but when I explained the value and necessity of correct vital statistics, their interest was considerably aroused. Both the President of the Council and the Chairman of the Ordinance Committee promised to bring the matter up at the next meeting of the Palatka Council. As a result, an ordinance was passed and, though it is not an ideal ordinance, it is a step in the right direction.

August 20th, I went from Palatka to DeLand, where I called on the Mayor and the various physicians. Here I found conditions most gratifying. The city has an adequate ordinance for the reporting of vital statistics, and I believe the Registrar is doing all in his power to enforce it.

August 22nd, I went from DeLand to Daytona. Here I called on city officials and physicians, as in the other cities. Daytona had an ordinance, but it was not being enforced. By it all physicians and midwives, or others, were required to report all births and deaths to the City Physician. Many physicians were neglecting this, and the City Physician himself had failed to report the vital statistics of the city to the State Board of Health.

August 27th, I was sent out near Highway Avenue, beyond the city limits of Jacksonville, to inspect a slaughter pen belonging to a Mr. Graddick. The building was constructed of rough boards, set about one or two inches apart, for the passage of light and air. It consisted of two rooms and an outer shed, and outside it was surrounded by pools of foul smelling mud, formed by blood and drainage water from the pen. Pigs were running at large, and these mud puddles formed a wallowing place for them.

The insides of the building were coated with blood and grease, the rafters were hung with cobwebs, and the floors were dirty. Flies of the blue and also the common house variety swarmed in the building and alighted on the meat, that was hung up after killing and dressing the animals. No screening was provided, and when the meat was put in wagons for conveyance to Jacksonville, it was dumped in the wagon box, and no covering was placed on top. Men working around the slaughter house frequently spit on the floor.

On September 6th, I inspected a slaughter house several miles outside of Jacksonville city limits belonging to Mr. H. L. Lane, R. F. D. No. 1. This was in about as bad condition as Mr. Graddick's place, but at the time of my visit he was having a new pen constructed, which he promised would be clean and sanitary.

On this same day I inspected also a slaughter pen on F. J. Melson's farm, conducted by Mr. J. F. Means. This one was not quite as bad as the other two, but it was far from ideal. Many flies were to be seen, there was no screening, and the boards were about as far apart as on the pen of Mr. Graddick. The building was not so old, and there was not so much mud surrounding it, but there was considerable odor from piles of bones and horns near the building.

On October 3rd, I was called to Pablo Beach to investigate alleged cases of scarlet fever. There were two cases, which proved to be chickenpox.

October 17th, I investigated several cases of smallpox, in a colored family in the woods near South Jacksonville. The patients refused to go to the isolation hospital, so I placarded the house. Next day one of these cases died.

The same day I investigated a case of possible hydrophobia /

in a dog out near the Moncrief race track in Jacksonville. One person had been bitten, but the dog did not prove to be infected.

October 27th, smallpox was reported in South Jacksonville, so I went there that afternoon to investigate. I found two cases, two white men, one in South Jacksonville, and the other out near Phillips postoffice, on the St. Augustine road. In each case all other members of the family had been vaccinated, so I placarded the houses.

October 29th I was detailed to investigate smallpox in this section. I spent October 29th, 30th, 31st and November 1st, and part of November 3rd, on this detail. During this period I made several trips to South Jacksonville, Phillips, Spring Glen, and the country surrounding South Jacksonville.

The cases I saw on October 17th in the colored family by the name of Gibson had all recovered, excepting the wife of the man who had died. I sent her to the isolation hospital, together with a small boy in a neighboring colored family. I was unable to find any more cases of smallpox, though I found a number of colored people who had had the disease in the past few months.

✓ During this investigation I visited the South Jacksonville schools and arranged to vaccinate the school children. I was assisted in this work by Mr. Henry Brown, and together we vaccinated over one hundred children, and several of the teachers. No new cases were reported, excepting in the family of Mr. Crozier, one of the white cases reported October 27th.

November 3rd, I transferred my headquarters to St. Augustine, where I spent the greater part of that month.

November 13th, I was requested to go to Palatka to explain to the Registrar of Vital Statistics a few points on the subject of vital statistics. While in Palatka I made calls on the various physicians, returning that evening to headquarters.

November 19th, I went to Daytona, saw members of City Council and the City Clerk, and recommended changes in their ordinance for collection of vital statistics. This ordinance has recently passed, and it will become effective January 24th, 1914. The City Clerk will act as Registrar for Daytona.

November 21st, 22nd, and 24th, I was on a detail to Phoenix Park, near Jacksonville, investigating smallpox. No active cases

could be found. On this visit I went to Cummer's Mill, and also to the public school, and vaccinated in all, about 120 persons, both white and colored.

From December 2nd to December 4th, I was detailed again to go to Phoenix Park, near Jacksonville. On this visit I found one case of smallpox, a white patient, under the care of Dr. Carswell. This patient was removed to the isolation hospital.

During this period I was also detailed to investigate sewage and closets at the Lincoln School, beyond city limits of the Highway section. There was no sewer system, and the surface closets were in a most filthy and unsanitary condition. No attempt was made at screening or in other manner excluding the flies. I reported also a filthy surface closet in the yard next to the school house. This house belongs to Mr. W. C. Warrington, and I called on him and requested him to provide a proper closet. December 9th I was requested to report at the Executive Office. On my arrival there I was again detailed to investigate some reported cases of smallpox out beyond Phillips Postoffice, on the St. Augustine road. I found one case, a colored man, whom I removed to the isolation hospital. I vaccinated five members of the family who had not had the disease.

On December 14th, I left for Seville, Volusia County, to investigate alleged cases of diphtheria. When I arrived there I was told of three families where there had been cases of sore throat. Two of these cases had been seen by Dr. Welsh, of Palatka, who had made a diagnosis of diphtheria. A gargle was prescribed, but no antitoxin was administered, neither were swabs taken from the throats. At the time of my visit all the cases had practically recovered from their acute symptoms, and on examination of their throats no membranes were discovered. However, I took swabs of all who had had sore throat, as well as several other persons in the same families. These I forwarded to the laboratory of the State Board of Health, and one proved to be positive diphtheria. This was the swab from one of the cases treated by Dr. Welsh.

The schools in this section had been closed until after the Christmas holidays. I advised that all persons having sore throat see that swabs be sent to the laboratory, and that wherever cases of diphtheria occur, that all cases be kept isolated, and other children in the family be kept out of school.

December 15th I returned to Palatka, where I interviewed Dr. E. W. Warren and other physicians as to the general sanitary conditions and the number of communicable diseases in Putnam County.

December 16th, I went to Green Cove Springs, where I called on Dr. L. C. Fisher, former county agent of the State Board of Health for Clay County. I called, also, on the other physicians, and on the editor of the local newspaper.

From Green Cove Springs I went to Jacksonville, and thence to St. Augustine on December 17th.

December 18th, I left on my final trip for the year, returning to St. Augustine on the evening of December 23rd. During this period I visited West Palm Beach, Fort Pierce, Cocoa, Daytona, and DeLand. At these cities I called on the various physicians, city officials, newspaper editors and others in an effort to obtain a fair idea as to the number of cases of various diseases in the counties of my district. No accurate figures are obtainable as to the number of cases of communicable disease, but the reports I did obtain will serve to show the relative frequency of each.

Following is a brief report of the prevalence of diseases for each county in my district :

DUVAL COUNTY.

The sanitary inspections outside of the city of Jacksonville, are made by the State Board of Health. During the year a general inspection of slaughter houses on the outskirts of Jacksonville was made, and these have since been put in a more sanitary condition. Smallpox prevailed in the early and fall months in Milldale and South Jacksonville, and in November and December in Phillips and vicinity, where two deaths occurred from this disease. A vaccination crusade was carried on in these places, about one thousand vaccinations being made during the year. Baldwin reported a case of smallpox during the spring.

CLAY COUNTY.

Nine cases of typhoid fever, one death; three cases of diphtheria, one death; two cases of scarlet fever; forty to fifty cases of

smallpox among colored people. Of malaria and dengue fever, no record was kept. Dr. Fisher, former County Agent, stated that there were a number of cases of dengue, and about the usual number of cases of malaria. There are a few cases of tuberculosis.

Sanitary conditions in Green Cove Springs and surrounding country are fairly good.

ST. JOHNS COUNTY.

From the report of Dr. A. W. Underwood, former county agent and present City Health Officer for St. Augustine, St. Johns County is shown to have been particularly free from any serious outbreaks of communicable diseases.

During the early spring months there were a number of cases of smallpox, confined principally to the colored race, and most of which contracted the disease elsewhere and were brought to St. Augustine for treatment; this city being the headquarters of the medical department of the Flagler System. Four cases of diphtheria have been reported, with one death. There have been three cases of scarlet fever reported. Malaria has not prevailed to any great extent, nor have there been but few cases of typhoid fever. During the fall and early winter months there have been a large number of cases of dengue fever. One case of pellagra has been reported by Dr. Webb, of St. Augustine, but this case developed elsewhere, and came here for treatment.

Dr. Underwood reports that sanitary improvement has kept pace with the general development of the county.

PUTNAM COUNTY.

From information secured from Former County Agent Dr. E. W. Warren, and other sources, Putnam County has an exceptionally good record.

There was a moderate wave of dengue fever throughout the county during the fall months, but malaria has shown a marked decrease compared with previous years. But few cases of smallpox were reported, and these were of a mild type, occurring among the

colored people, with whom the usual prejudice exists in regard to vaccination.

Cases of diphtheria have not been accurately reported, and it is to the negligence of some of the physicians that this condition is due. It is highly probable that many mild cases were never reported, as swabs were not always taken of patients suffering from sore throats of a suspicious character.

VOLUSIA COUNTY.

My report for Volusia County is based principally upon information furnished by former county agents, Dr. John McDiarmid, of DeLand, and Dr. G. A. Klock, of Daytona, also from Dr. Roy Howe, City Physician of Daytona.

Two cases of smallpox were reported, with no deaths, ten cases of typhoid, principally from Daytona and vicinity, and two or three cases of diphtheria. Diphtheria reports have probably been inaccurate, as this does not include the two cases reported from Seville.

There was one case of measles and one case of cerebro-spinal meningitis. Ten cases of pellagra were reported, with two deaths. Tuberculosis is present to a certain extent, but is confined principally to the colored race, and the poorer classes of white people. No record has been kept of malaria, but the number of cases has been small. As in all other counties of my district, little notice is taken of uncinariasis, though this disease is widely prevalent among the country residents.

BREVARD COUNTY.

My report for Brevard County is based almost entirely upon information secured from Dr. W. L. Hughlett, of Cocoa. He reports one case of smallpox, which he thinks was the only case occurring in the county during the past year.

Tuberculosis is present more or less continuously, and Dr. Hughlett reports twelve cases in his practice during the year 1913.

There were three cases of mild scarlet fever, with no deaths, and one imported case of anterior poliomyelitis.

A great many cases of dengue occurred, with no deaths. Dr. Hughlett had about fifty cases in his practice alone. No cases of diphtheria reported.

ST LUCIE COUNTY.

Dr. W. E. Van Landingham, former county agent, and other physicians report the following for St. Lucie County:

Four cases of smallpox, with no deaths; three cases of typhoid fever, and twenty-seven cases of tuberculosis. No record was kept of measles, but a rough estimate places the number at forty or fifty cases.

A number of cases of pertussis occurred during the year, and during the fall months, quite a number of cases of dengue fever.

PALM BEACH COUNTY.

My report for this county, while approximate, is probably more accurate than any of the others, as I interviewed more physicians than in some of the other counties.

The following diseases have occurred during the year 1913: Smallpox, two cases; typhoid fever, eleven cases, one death; diphtheria, none reported; scarlet fever, four or five cases; dengue fever, a general epidemic throughout the county; malaria, a few cases; pertussis, many cases, one death; tuberculosis, no record kept, but a few cases are present each year; measles, a few cases; pellagra, no cases reported; and one case of glanders of many months' standing, which seems to be improving.

From the above, it would seem that with the exception of the eleven cases of typhoid fever, Palm Beach County has an exceptionally good bill of health. All of these cases occurred at West Palm Beach outside the area supplied by sewers. They all occurred in the same section of town, and it is my belief that practically all were preventable, and due to open surface closets, plus flies.

The death reported from pertussis was caused by a complicating acute bronchitis.

General sanitary conditions throughout the county are reported as good, though much could be done in the way of improvement

on the construction of surface closets outside town limits and in country districts.

* * * * *

In conclusion, I wish to bring to your attention a few observations I have made during my short term of service.

Smallpox as a rule is of a mild type, and occurs more often among the colored people. This may be accounted for by the fact that the colored race as a whole are afraid to be vaccinated. The mildness of the infection has had a bad effect, in that less care is exercised in the isolation of cases.

In the cases of measles, mumps, chickenpox, and pertussis, little care is exercised, and mothers accept these diseases as incidents of childhood. Only a few cases of scarlet fever occurred in my territory, and they were not severe cases. The hardest thing in the isolation of these cases seems to be to keep the patient isolated after he feels perfectly well, but before desquamation is complete.

Malaria is looked upon as a mild illness, and many physicians are in the habit of diagnosing and treating malaria without ever taking a blood smear. Consequently the type of the disease is diagnosed by symptoms alone. I have found that in the cities where the people are alive to the importance of screening, malaria is comparatively infrequent.

The seriousness of diphtheria seems to be realized by all, but there are a few physicians in my territory who rely neither upon the microscope as an aid to diagnosis, nor upon antitoxin as a curative agent.

Pulmonary tuberculosis, like the poor, is always with us, and as the largest number of cases occur among the poorer people the need of a State sanitarium for these cases is emphasized. They have no money, they cannot work, they do not always receive proper treatment and nourishment, consequently many of them die.

In speaking of uncinariasis, I must confess I am speaking more from observation than from information given me by any physicians. Physicians told me: "Oh, yes; we treat a few cases."

If one can judge by such symptoms as anemia, poorly nourished appearance, dry hair, lack of development, a certain peculiar

puffiness around the eyes, etc., I should say there were many thousands of hookworm sufferers in my territory.

Frequently I look over groups of loafers, and children in country districts, and pick out case after case as the train stops for a few moments at some station.

Except in incorporated towns or cities where ordinances require proper surface closets, I find the most unsanitary surface closets. The idea seems to be to protect only the person from the view of passers-by. Certainly no attempt is made to hide the droppings from view or to prevent pigs or chickens from feeding upon the same. Flies also have free access both to the privies and to nearby houses. Were a State law passed requiring all persons to conform with certain clearly defined specifications in the construction of surface closets, I feel sure much would be accomplished in the way of prevention of hookworm disease, and also the various fly-borne diseases with which we have to contend.

With the beginning of the new year I propose visiting some of the country schools in my district in an effort to relieve some of the children of hookworm disease. Lectures may be given and free treatments administered, but some people must be compelled by law before they will obey the commonest rules of right living.

Trusting that the foregoing pages will give you a fair idea of conditions in my territory, and that the future will see many improvements, I am,

Respectfully yours,

MAURICE E. HECK,

Assistant to the State Health Officer.

REPORT OF DR. C. H. DOBBS

CENTRAL DISTRICT.

Gainesville, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—The following is a report of health conditions and health work in the Gainesville District (comprising Alachua, Levy, Hamilton, Suwannee, Columbia, Baker and Bradford Counties) for the period beginning July 16, and ending December 31, 1913.

After my arrival in Gainesville, July 16, it seemed that it would be profitable to spend the next two or three weeks in a hurried trip over the entire district, this trip having in view two objects: First, the interviewing of physicians, officials and editors in the various towns throughout the district; and second, a superficial survey of the sanitary conditions prevailing in the various localities. I accordingly left Gainesville on July 24th, and before my return visited the following towns: Lake Butler, Lake City, Macclenny, White Springs, Jasper, Fort White, Live Oak and O'Brien, calling upon the city officials and as many of the physicians as possible in each place, and interviewing the editors of the various papers in an effort to have our weekly press service adopted by them for regular use each week in their publications. Four newspapers in this district are using this service regularly each week, and three others are using it often—whenever their space will permit.

In compliance with a request from Mr. J. J. Hannigan, who entered a complaint against the Lake City Ice Company, their factory was inspected during my stay in Lake City. This plant was found to be in good condition, and I saw no legitimate grounds for complaint. As this complaint dealt only with the question of *macroscopic* impurities or filth in the ice, it was not deemed necessa-

ry at this time to make an examination of the water used by the plant in the manufacture of the ice. Later, however, at the request of the Atlantic Coast Line and Seaboard Air Line Railroads, in conformity with the United States Public Health Service ruling, a bacteriological examination was made of the water used by both the Lake City Ice Company and the Diamond Ice Company, of Gainesville. In each instance the "raw" water was found to be slightly contaminated, but the *distilled* water failed to show any evidence of contamination. Both plants use distilled water exclusively in the manufacture of their ice. ✓

Returning to Gainesville August 4th, I received from Dr. J. C. Bishop reports of two cases of diphtheria there, both of which later terminated fatally. Following these cases there occurred a number of others in Gainesville, and with the exception of a few days in the latter part of August, practically the whole of August and September were spent in Gainesville in the management of this situation. We were unable to trace the source of the infection except to determine that there were at least four distinct foci of infection. (1) A case imported from South Florida; (2) one from West Florida; (3) one from Augusta, Ga., and (4) one from Clinch County, Ga. The situation was accordingly controlled by prompt isolation of patients and suspects, and by immunization of all persons who had been directly exposed to the disease.

Several cases of scarlet fever also occurred in Gainesville during this period.

One very gratifying incident, which was probably due in some degree to the occurrence of these cases of diphtheria in Gainesville, and which was certainly hastened thereby, was the creation in Gainesville of a municipal health board, with the following personnel: Dr. J. F. McKinstry, Jr., President; Dr. E. Lartigue, Messrs. H. E. Taylor, W. M. Dale and W. L. Hill. The Board elected Dr. W. Lassiter to the position of City Health Officer and Secretary of the Board. Gainesville is greatly indebted to Mr. W. L. Hill and to Doctors McKinstry and Lartigue for their earnest and untiring efforts in the organization of this health department.

During the same period (July, August and September), diphtheria was reported at Micanopy, Archer, Lake Butler and Bronson; smallpox in the vicinity of Gainesville; scarlet fever at Fort

White; and later, diphtheria near LaCrosse, at Hampton, Live Oak, Cedar Key, Meredith and Lula; scarlet fever at Live Oak; and smallpox at Starke and Dowling Park. These scattered outbreaks of smallpox have been controlled solely by vaccination. It is practically impossible to make an accurate estimate as to the number of persons vaccinated in this district during the past six months, but from the reports of the various physicians I would place the number at from four hundred to five hundred. I have personally vaccinated eighty-one persons during that time. The following table shows in convenient form the number and location of cases of contagious disease which have occurred in this district during the past six months. No record of typhoid and tuberculosis has been kept because of the very inaccurate and incomplete reports received from physicians on these two diseases.

SMALLPOX

	No. Cases.		No. Deaths.	
	White.	Colored.	White.	Colored.
Gainesville vicinity -----	0	26	0	1
Dowling Park -----	1	0	0	0
Starke -----	3	8	0	0
	—	—	—	—
Total -----	4	34	0	1

CHICKENPOX

Gainesville -----	2	6	0	0
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SCARLET FEVER

Gainesville -----	3	0	0	0
Live Oak -----	1	0	0	0
Fort White -----	1	0	0	0
	—	—	—	—
Total -----	5	0	0	0

DIPHTHERIA

Gainesville -----	25	0	2	0
Micanopy -----	3	0	1	0
Near LaCrosse -----	0	4	0	1
Archer -----	1	0	1	0
Lake Butler -----	8	0	2	0
Bronson -----	1	0	1	0
Hampton -----	1	0	0	0
Live Oak -----	2	0	0	0

Cedar Key -----	1	0	0	0
Meredith -----	1	0	1	0
Lula -----	1	0	0	0
	—	—	—	—
Total -----	44	4	8	1
Total number cases communicable diseases reported, exclusive of typhoid and tuberculosis -----99				
Total number of deaths reported from communicable diseases, exclusive of typhoid and tuberculosis -----10				

Rabies was, for a time during the past summer, rather prevalent in Starke, several animals being bitten by a rabid dog shipped there from some point in Georgia. The situation was controlled, however, by the prompt passage and rigid enforcement of a muzzling ordinance.

In November I was called to Micanopy by the occurrence there of two cases of typhoid. I visited these two cases with Dr. Howell, and was gratified to find everything in excellent condition, the patients being isolated, the rooms well screened and all due precautions being taken as to dishes, bed-clothing, disposal of feces, etc. After a thorough investigation, it seemed that the most probable source of these cases was an exceptionally filthy toilet which had been recently used by a number of turpentine hands who had been working in the vicinity but who had since left town. This privy is situated just in the rear of the residence of a Mr. Tompkins, whose wife was the first to contract the disease. The citizens of the town were a little inclined to be panic-stricken, though I tried to assure them that there was no cause for alarm. However, I took advantage of this feeling to impress upon them the necessity of a proper ordinance regulating the type of privy to be used within the town limits.

The Mayor, Mr. E. A. Hickson, called a meeting of the council and I met with them to press this point. The suggestion was favorably received and the Mayor requested me to mail him a copy of the Jacksonville ordinance, so that a similar ordinance with, of course, a few minor changes to fit local conditions, might be passed by the council of Micanopy. A committee was also appointed to inspect conditions within the town and to put everything in as good condition as possible under the present ordinance. A thorough clean-up of the town has resulted.

During the past three months a very interesting experiment has been in progress at the creosoting plant of the A. C. L. Railway near Gainesville. Last April Mr. L. E. Means, a truck farmer residing near this plant, made complaint that the waste therefrom was polluting Hogtown Creek, a small stream furnishing water to his cattle and from which he pumps water for irrigating purposes. He requested that the State Board of Health investigate the matter to determine whether this pollution of the stream was having any deleterious effect upon his cattle and vegetables. Dr. Byrd visited Gainesville at that time and after a thorough investigation it was decided that the only feasible method of arriving at a definite conclusion was an actual test of the effect upon cattle so confined that they might have access to no other water.

Conditions at that time did not permit the carrying out of this idea, but during the early part of October, Mr. W. A. Fisher, Superintendent of Timber Preservation, of the A. C. L. R. R., made arrangements to put this plan into execution. A pen was accordingly constructed enclosing four acres and so arranged that the animals therein confined should have access to no other water than that flowing down this stream. After an inspection by Dr. Dawson, State Veterinarian, three calves were purchased by the A. C. L. R. R., and confined in this pen. Three pigs belonging to Mr. Means were also confined therein.

It is not the purpose of this report to give a detailed description of the process in use at this treating plant, but, owing to certain changes since Mr. Means' complaint was made, it might be well to describe the fundamental principles of the process. The timbers to be treated are run, on trucks, into steel cylinders approximately 70 feet in length and 7 feet in diameter, which are then closed, creosote run in by gravity from an overhead tank and a high positive pressure produced in the cylinders. This pressure is maintained for about one hour, and then a vacuum produced in the cylinders. The negative pressure is maintained for about one-half hour. The waste (pump water and creosote not absorbed by the timbers) is then drawn off and discharged into the drainage ditch, fresh creosote is again run into the cylinders and the whole process repeated. This was the process in use last April when Mr. Means made his complaint. With the plant in operation at its maximum capacity under

this process the daily waste amounted to about 75,000 gallons. Since that time, however, a large tank has been constructed into which the waste is drawn and from which it is again run into the cylinders, thus using the same pump water over and over and decreasing the waste to about 15,000 gallons a day. In November still another change was introduced in the process whereby pressure and vacuum are created in the cylinders only once for each lot of timbers, instead of twice as formerly, thus further decreasing the amount of daily waste to about 7,000 gallons, or about one-tenth the volume discharged at the time Mr. Means entered his complaint.

The cattle and pigs selected for this experiment were kept confined for eight weeks and showed no ill effects whatsoever. Before releasing these animals on December 9th, they were inspected by Dr. Munsell, Assistant State Veterinarian, who stated that in his opinion the animals had not been injured in any way by the constant use of this water. As nearly as it is possible to estimate it, the average concentration of this waste, with the plant running at its maximum capacity, is about 1 : 2000. Dr. Munsell thinks that, even with no allowance for further dilution by the waters of the creek, this waste would not be injurious, but rather, that the creosote being in a solution of this strength, would actually be beneficial. This was the final conclusion in regard to the matter.

The controversy has, however, been re-opened since that time. Mr. Means now complains that two litters of pigs, born about December 1st, are afflicted with some serious nervous disorder which he attributes to the polluted water drunk by the sows before the birth of these pigs. Dr. Dawson made an inspection of these animals but I have not as yet had from him, a statement of his opinion in regard to the matter.

According to the plan recently adopted, the collection of vital statistics has been taken up by the three towns of this district of more than 2000 population, viz., Gainesville, Live Oak and Lake City. In Gainesville, this work falls under the duties of the local health board, Dr. Lassiter, City Health Officer, acting as Registrar of Vital Statistics. Very accurate reports are, I think, being returned from Gainesville.

At Live Oak and Lake City, we have been much slower in getting this work started. Mayor C. D. Blackwell, of Live Oak, is

trying to push matters as much as possible, but owing to a press of important business the council has, so far, failed to pass any ordinance requiring the report, to the Registrar, of births and deaths. Mr. Blackwell, however, assures me that he will push this matter through in the near future. Meanwhile Mr. J. S. Kincaid, who has been appointed Registrar, is returning fairly accurate reports.

Lake City has an ordinance requiring reports of births and deaths, which has heretofore never been enforced. The work there was not really started until the appointment in October of Dr. Dwight Rivers as Registrar; the City Clerk, who had previously acted in that capacity, having sent in very inaccurate reports. While the results have so far been rather unsatisfactory in both Lake City and Live Oak, still a start has been made and I feel confident that the work will soon be upon a much firmer basis.

The general sanitary conditions throughout the district are good. With the exception of a few very filthy open privies and several exceptionally insanitary slaughter pens near Live Oak, there have been few conditions which demanded mention. At least two inspection trips have been made to all towns of any importance in the district with the exception of Hampton, Jasper, High Springs, O'Brien, Newberry, Dowling Park, Wellborn and Macclenny. I have been unable to make my second visit to these towns on account of a badly infected foot which has confined me to my room for the past week. During these visits to the various towns, I have personally interviewed sixty physicians, seven editors and thirty-one municipal officials.

There is in evidence throughout the entire district a spirit of hearty and intelligent co-operation on the part of both physicians and the laity, which is indeed gratifying and which promises well for the future health of the district as a whole.

The health conditions prevailing throughout this district during 1913 have been, on the whole, good, no serious epidemics having occurred. A summary by counties follows:

ALACHUA COUNTY.

An outbreak of diphtheria in Alachua County which resulted in thirty-three cases, all told, occurred during August and Septem-

ber. Practically all of these cases were confined to Gainesville, though a few scattering cases occurred at Micanopy, Archer and near LaCrosse. A number of cases of smallpox have occurred among the negroes of the county, all, however, being in the rural districts. A few cases of chickenpox and scarlet fever have also been reported.

The occurrence of several cases of typhoid at Micanopy stimulated the Town Council to action toward the improvement of sanitary conditions there, especially in regard to the regulation of the type of privy to be used within the town limits.

The establishment in Gainesville of a City Health Department has done much toward the betterment of health and sanitary conditions there, special attention having been given to the control of communicable disease and to the condition of markets and groceries.

The sanitary conditions in the other towns of the county are the average conditions found in similar communities elsewhere. None of these towns, with the exception of Gainesville, has a sewerage system; the open privy prevails in all, though as previously stated, Micanopy has taken steps toward remedying this evil.

BAKER COUNTY.

Considering the absolute lack of any attempt at the improvement of conditions in this county, it has been singularly free from communicable disease during the past year. It is strictly a rural county, Macclenny being the only town of any importance in the county. Not a home in the entire county is provided with any sort of a sewerage system; only the crudest of sanitary (or rather insanitary) conditions prevail throughout. There are only three physicians in the county, all of whom are located at Macclenny. No communicable disease has been reported from Baker during the past six months, and the physicians assure me that typhoid is practically unknown there. The conditions are certainly ideal for its spread, and this singular freedom from it (if these statements may be relied upon) can only be attributed to the lack of an initial case from which the infection may spread, or to the incomprehensible mercy of the good Lord.

BRADFORD COUNTY.

A few cases of smallpox and diphtheria have been reported from Bradford County, most of the cases of smallpox having occurred among the negroes near Starke. The great majority of the white population of Starke have been vaccinated. Rabies was, for a time, quite prevalent in Starke, but was controlled by the passage and enforcement of a muzzling ordinance. Dr. T. D. Gunter is doing good work in Starke as Town Health Officer. The general sanitary conditions in Starke, Waldo and Lake Butler are above the average, a number of homes in Starke and Waldo being equipped with private sewerage systems.

COLUMBIA COUNTY.

The sanitary conditions throughout this county are good, though Lake City is the only town provided with a sewerage system. No communicable disease has been reported from this county during the past six months. I was especially gratified to find that the health conditions among the employees of the large lumber company at Watertown are exceptionally good. During an outbreak of smallpox in Lake City a year or so ago practically all of the white school children and many of the negroes were vaccinated, as well as many of the children of the rural schools of the county. Smallpox is, accordingly, rarely seen.

It is regrettable that Lake City has been slow in the work of collecting vital statistics, and it is to be hoped that this work will soon be taken up with renewed vigor.

HAMILTON COUNTY.

The physicians of Hamilton County have been very lax in reporting and in replying to letters of inquiry, but to the best of my knowledge there has been no occurrence of communicable disease there during the latter part of 1913.

Jasper, the county seat, has no municipal sewerage system, but a number of the homes are provided with private systems. The

general sanitary conditions throughout the county are none too good.

LEVY COUNTY

Levy, like Baker, is a rural county, Cedar Key and Bronson being the only towns of any importance. The health conditions in Cedar Key, owing to its favorable location on a small island, are far better than is usually the case in a town of this size. Typhoid, however, is prevalent throughout the remainder of the county. The open surface privy is the rule. The general sanitary conditions are those commonly found in all rural districts of this and other Southern States. No accurate reports as to typhoid have been received and, aside from a few cases of diphtheria, no communicable disease has been reported from this county.

SUWANNEE COUNTY.

One case of smallpox at Dowling Park, two of scarlet fever at Live Oak and Fort White, and two of diphtheria at Live Oak, have been reported from this county.

Live Oak is provided with a good sewerage system, and the general sanitary conditions are fair. Several low spots, within the limits of the town, which were constantly covered by water, thus breeding numerous mosquitoes, have been filled. The condition of the markets and slaughter pens has been greatly improved since an inspection of them in October.

The officials in all the towns of this county display a very commendable desire to co-operate in any way for the betterment of conditions in their respective communities.

Very respectfully yours,

C. H. DOBBS,

Assistant to the State Health Officer.

Report for period beginning July 16th, and ending December 31, 1913.

REPORT OF DR. E. W. DIGGETT

ON SPECIAL SERVICE TO SEMINOLE INDIANS.

Tallahassee, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR SIR:—I have the honor herewith to hand you my report of special detail to the Seminole Indians.

In July, last, I received a letter from Dr. W. J. Godden, medical missionary to the Seminoles, notifying me that the Indians had requested him to write the State Board of Health, asking that I be sent to the Everglades to investigate health conditions, laying special stress upon the probable prevalence of hookworm disease among them.

Four years ago, when doing hookworm work in Lee County, I visited the Glades upon two occasions, making my headquarters with Dr. Godden. On the second visit I diagnosed a case of hookworm in the family of one of the Indians. It was probably upon the strength of this diagnosis that the request was sent.

The detail suggested by you and confirmed by the President of the State Board of Health, Hon. Frank J. Fearnside, to commence October 1st, was received and accepted. Upon that date I left Tallahassee for the Everglades, stopping over in Jacksonville to pick up microscope and supplies.

Upon my arrival in Fort Myers I met Dr. Godden, and we arranged to go into the Glades together. After some delay, waiting for ox teams to arrive from the mission post, etc., we made a start. Unfortunately, when only six miles from Fort Myers, Dr. Godden was taken suddenly ill, and we were forced to return to Fort Myers, where I left him under the care of Dr. Hunter, and drove into the Glades with a team hired from a local stable. After a rather hard and uneventful drive of two days and a half, we reached the mis-

sion post and found, upon arrival, several Indians camped near the post awaiting me. These Indians immediately left for the other camps to advise their people of my arrival. In a few days we had fifty or more Indians encamped near the mission post, who quickly availed themselves of the opportunity for examination and treatment.

In each case a microscopic examination was made in addition to inspection. In this work I was most fortunate in securing the valuable assistance of one of the more intelligent of the Indians, Josie Billie, an acquaintance of my previous visit. It is most gratifying to be able to state that I received the most hearty co-operation from the Indians, and in not one single instance was my advice or treatment refused.

The social custom and mode of life of the Seminole Indian is a very interesting study, but can only be learned by constant observation. I am indebted to Dr. Godden for the valuable and interesting information given below on this subject.

Contrary to popular opinion, the Seminole has considerable knowledge of agriculture, and when the hunting season is ended, repairs to his field and grows various crops, such as corn, cane, pumpkins and sweet potatoes. When the cane is ripened it is made into syrup and sold, with other products, at the trading posts. They also raise hogs and chickens, carrying the latter with them on their hunting trips.

It was my good fortune to accompany one hunting party, and the impression made is not one to be easily forgotten. The procession was a long one. First came an ox wagon loaded down with the camping outfit, pickaninnies, chicken coops and food supplies. Next came my buckboard, with camping outfit, driven by one of the squaws, and filled to overflowing with pickaninnies. Then came the men, each carrying his rifle, and finally more squaws, one leading a pig on a leash. In this manner we trekked along across the prairie.

In camp the Indian is very hospitable, and if one has the good fortune to be invited to accompany a hunting party, he is invited to eat with them, and is made to feel perfectly at home. The food is simple, but very nourishing, and well cooked. It consists mainly of game, such as wild turkey, broiled venison, etc., with bread

baked in a frying pan, and the omnipresent sofki, a stew made of corn, meat of different kinds, and flour. The meals are served in the most primitive way, the men squatting in a circle with the sofki pot in the center, and when feeling so inclined helping themselves with a large hand-made wooden spoon, each in turn leaving the spoon for the next one. The squaws wait upon the braves, and with the pickaninnies made the second table. Meals are served at rather irregular intervals when on hunting trips, the hunters going the whole day, from sunrise until dark, without food.

The Indian depends almost entirely upon hunting for a livelihood, and when the fur market is good, gets fair prices for his pelts. Unfortunately, the white hunter has encroached upon his territory, and it is only a matter of a few years when the game will all have disappeared. Each year sees a diminution in the number of otter hides brought to the trading posts, and the alligator market is almost a thing of the past.

While with the Indians I learned of one of their superstitions concerning the skinning of animals. At the present time there is quite a demand for coon skins, and as I had seen several coons caught in the otter traps, I inquired why they did not skin the coons and sell the hides. I was answered in this way: "Think so Indian no skin coon, make him sick ojus." Upon further inquiry, I found it was not all superstition. As a matter of fact, the odor of the coon is very distasteful to the Indian, and in some instances makes them very ill, causing excessive vomiting. Before leaving the post I saw all the hunters go through a course of treatment given by the Indian doctor to prevent this vomiting. The treatment consisted of a tea made of some herbs (I could not ascertain the name) taken internally, and also rubbed over the body. After going through this rather drastic treatment one of the Indians told me: "Think so skin coon ojus now." I was very glad to see this, as it added another avenue of income to their fast disappearing resources.

Their fields and big camps, as they call them, are scattered through the Big Cypress Swamp, and in some instances are very difficult of access. They are usually situated upon high ground, a small cabbage hammock or pine island, and are very fertile. An Indian will raise a crop on one of the fields, after tremendous labor in clearing up, and will then leave it. That is the end of that field,

Josie Billie Buck in foreground.

Hookworm victims, notice beads around the necks of squaws.

as no other Indian will work it afterward. During the season of planting they gather together in clans, the husband going to the wife's family, as the line of descent passes through the female.

Contrary to popular opinion, the Seminole can and will work. It was my good fortune to see them at work, both at the mission post and on the Deep Lake Railroad, which is under construction from the Everglades on the west coast, to Deep Lake, some thirteen miles.

Upon one of my visits to the end of the line, in company with Mr. McCormack, the President of the Company, and Mr. Storter, the Superintendent of Construction, I saw a feat of strength performed by one of the Indians which increased my admiration for them as perfect specimens of physical manhood. One, Dixie by name, who had tired of waiting for the construction gang to arrive, began carrying cross ties and placing them in position. When we saw him first, he was in the act of lifting a cross tie upon his shoulder, which he accomplished, carrying it through mud and water and placing it in proper position. Our compliments upon his wonderful strength seemed to please him very much, and upon his return, he picked up two ties, one on each shoulder, and staggered off with them. The negroes of the crew stood in amazement and marvelled how he could do it, when it took three of them to carry one tie and place it. It is unnecessary to state that Mr. McCormack would not allow the Indian to continue this feat of strength.

The Indians are quick to learn what is wanted of them and go about their work in a cheerful but silent manner.

The Seminole shows considerable affection for his family. Several times, while at the Mission Post, I have seen a brave wheeling his pickaninny about in a barrow borrowed from the Missionary. When sickness visits them, they are very solicitous for the sick ones, showing considerable skill as nurses.

Their system of medicine I found very difficult to understand. They have their doctors, who are very skilled in breaking up fevers. The drugs they use are more or less secret preparations, made out of herbs and plants found in the Glades. In addition to using the herbs and plants the medicine men are very expert in the art of bleeding and resort to this method of treatment on all occasions,

using an instrument for the operation made from a cow's horn. It is a system of wet cupping, the large end of the horn being placed over the scarified area and the air exhausted through the small end. They also use long incisions over a painful area to let out the "bad blood," as they state it. Hydrotheraphy is also practiced for the reduction of fever. Their mainstay, however, is vomiting and purging, which they practice to excess.

I was called upon on two occasions to extract teeth and found, much to my surprise, several pairs of forceps in the possession of one of the Indians who, I learned, did that kind of work when asked. While upon this subject, I must state that, upon close observation, I noticed the majority of the Indians had poor teeth, probably due to absolute lack of care, and possibly also to their manner of living, and the excessive use of tobacco. This fact has some bearing on the number of cases of indigestion I was called on to treat.

Before leaving the subject of social customs, it would be interesting to mention the manners of dress. The men wear a one-piece garment in the form of a shirt, reaching, in the older men, to, and in the younger men, a few inches below, the knees. These shirts are made from a cheap cotton material of many colors, the work being done by the squaws upon sewing machines, in the use of which they are very expert. The squaws wear a two-piece garment consisting of a long skirt fastened loosely around the waist, and a cape-like waist reaching in front to about three inches above the waist line, and in the back, several inches below, coming to a point. These garments are also of many colors, but not nearly so elaborate as the men's costumes. The squaws show a decided fondness for personal adornment in the shape of beads, which they wear in great numbers around the neck. In many cases the beads weigh in the neighborhood of twenty-five pounds. As a rule, shoes are not worn, and never, so far as I could observe, by the women. In a few instances I saw the men wearing shoes or moccasins on their hunting trips.

The subject of religion among the Seminoles is one almost impossible to understand. They evidently believe in the Great Spirit, and perform their religious rites assiduously. One of their customs is that of the "fire stick," which they use upon the young

brave to test his endurance to pain and prepare him for the Happy Hunting Ground.

The Seminoles at the present time have no chief, but are ruled by a Council of Six, who meet at the annual festival, or Green Corn Dance. This Council hears differences and passes judgment on offenders. In some instances punishment is very severe, and in one authentic case the offender was sentenced to death.

At the meeting of the Council marriages are arranged, and divorces granted. I do not wish to convey the impression that all marriages are arranged by the Council, for where two young people are mutually attracted, they are allowed to marry. The males outnumber the females, which may account for the slow increase in numbers.

The annual Green Corn Dance is a season of festivity attended by all the different clans. Business and social engagements are made at this time. Space will not permit a detailed description of the mission post, but I cannot allow the opportunity to pass without saying a few words concerning the mission and the medical missionary, Dr. Godden.

The mission is located on an old Indian field—cabbage hammock—surrounded on all sides by long cypress strands, which, in the rainy season, are from three to eighteen inches deep in mud and water. It is well located, and Dr. Godden intends to take up farming on a small scale, hoping to get the Indians more interested in agricultural pursuits.

The buildings at the post consist of the mission house, store building and sheds, the latter built entirely with Indian labor. All goods sold from the store are hauled by ox teams from Fort Myers, some seventy miles. At times, during the rainy season, it will take a team from three weeks to a month to make the journey; under more favorable circumstances, it takes twelve to fourteen days. The store is not run for profit, but as an accommodation to the Indians. Here they can sell their pelts, and obtain the best price the fur market affords, the mission simply taking a few cents to cover transportation charges.

To see the Seminole trading is very amusing and instructive. When he sells his skins he insists on receiving actual cash. He then turns around and buys what he wants, paying for each article

as it is handed him. They are very exact, and seem to understand the coinage very well. The principal articles bought by the Indians are cloth of all colors, beads, pins and other fancy goods; bacon, grits, flour, coffee, sugar, lard, ammunition both for shot gun and rifle, and last, but not least, tobacco.

Dr. Godden is an Englishman of rare ability, an articulated solicitor in London, and has been admitted to the bar of Florida. He has devoted the last nine years to the social, physical and spiritual welfare of the Indians. It is his intention to take up the industrial side, as well as the spiritual and medical, and if he receives the support he merits from the Episcopal Church, as well as the support of the United States Government and the people at large, there is no doubt in my mind of his success. Knowing Dr. Godden and his work so well, I feel that I have a right to say this.

I know of no man better fitted for this work than Dr. Godden, and a man who is devoting his whole life and energies for the welfare of the needy Seminole—undergoing the hardships, and living under the most unattractive surroundings, as he is compelled to do, certainly deserves the highest commendation. I can only add, God grant that his wishes may be fulfilled and his hopes realized.

In taking up the health and medical part of my report, it is not my intention to go into details of the cases seen and treated by Dr. Godden and myself during my stay at the post, as space will not permit.

Upon careful observation I found the sanitary conditions of the camps very good under the circumstances. I took the opportunity to have a long talk with the more intelligent of the Indians, namely, Billy Konipatchie, who had some schooling in his younger days, while in the employ of Captain Hendry, of Fort Myers, and his son, Josie Billie. They seemed to understand perfectly what I was saying, and I had the satisfaction of seeing the result of my talk before leaving the post. I impressed upon them the mode of infection of the hookworm, and demonstrated how useless treatment would be if they continued their present method of disposal of excrement; advised the burning of all trash and excrement where possible, and when at their permanent camps, the establishment of latrines where the excrement could be collected and buried.

I talked to them of the danger of flies and the diseases carried

by them; told them how to destroy the garbage and prevent breeding; informed them how malaria was contracted, and demonstrated the mosquito that carried the disease, of which there are a great plenty. As they all use cheesecloth screens of double thickness, it was not necessary to dwell upon that subject. Draining surrounding ponds and swamps is impossible—as any one knows who has visited the Everglades.

Malaria is quite prevalent among the Indians, several presenting themselves for treatment during my visit. Unfortunately, Tommy Doctor, the most prominent medicine man, could not understand English very well, and consequently I was unable to impress upon him the necessity of continuing the quinine after the fever had left the patient. I tried to do this, however, through Josie Billie, and believe I succeeded to a certain extent.

I took the opportunity when talking to Josie Billie, who is a member of the Council, of pointing out how advantageous it would be if they would allow one of their young men to be educated as a physician and afterwards practice among them. In talking with Josie on this subject, I discovered that a visit from an Indian doctor was paid for in cloth, four yards for each visit. Sometimes hogs were added to this payment, but the cloth must always be forthcoming.

The title of doctor seems to be handed down from generation to generation, irrespective of special training and fitness for the position. The doctor does not confine himself to the practice of medicine, but hunts and makes his field as the other Indians do.

A very interesting case was brought to me for treatment, that of a little child three years old, who had been very ill for some months, and had been under the care of my friend, Tommy Doctor. Owing to the fact that the doctor was being treated by me for hookworm, and as the Indians will not allow their doctor to treat them if he, the doctor, is under treatment by another doctor, the child was brought to me. The case was very interesting—evidently epidemic infantile paralysis. The subsequent history is rather interesting. After being under my care for two weeks or more, the Indian doctor was called again, but finally gave up the case as hopeless, and departed on a hunt, leaving the child in the care of Josie Billie. I was told that the child was very much worse, and

asking if I could be of any assistance, was told by Josie Billie, "No, Indian doctor savvy ojus, white doctor he no savvy, think so pickaninny sick ojus, think so big sleep." Upon inquiring what Tommy Doctor's diagnosis was, I was told this legend: "Tommy Doctor he say long time ago when Indian and white man fight, they kill each other ojus, then split each other open, and this make Indian sick ojus now. Think so that is trouble with pickaninny now. No give any more medicine."

The next day this child died, and was buried according to their customs. I am indebted to Dr. Godden for the following information concerning the burial customs of the Seminoles:

Upon the death of an individual, the body is carried a few hundred yards from the camp, and there prepared for burial. After the preparations are completed, the funeral procession forms, being led by the nearest relative of the deceased, and followed by most of the relations on the mother's side. This procession follows the corpse, which is carried to some place in the cypress, laid on top of the ground, and a cairn of logs built over it. The grave receives attention for about three months, and then the fires are allowed to burn up the remains.

It was quite evident upon my arrival at the post that the object of my visit was the investigation and treatment of hookworm. Upon the arrival of the Indians they would immediately be brought to me, by one who had received treatment, when specimen outfits with full instructions would be distributed. It is very gratifying to note that not in one single instance did they fail to return the outfit after following my instructions to the letter; in fact, they exhibited a wonderful amount of intelligence, far ahead in many ways of that shown by seemingly intelligent white people.

By following this method I was able to gather, examine and treat in the neighborhood of ninety cases. All microscopic examinations for the ova of the hookworm were positive with one single exception, that of a child about nine months old. Ninety-nine per cent. is a rather appalling average, yet it can readily be accounted for by the absence almost entirely of shoes, and the manner of living.

I had a little difficulty at first, in administering the capsules to the young children, the first case being especially difficult, but after

Road through cypress swamp to Mission post.

a lot of persuasion on my part and on the part of parents and bystanders, we finally succeeded. After this, we had no further trouble.

When examining the specimens from the adults, I made it a point to demonstrate personally to each the ova. It was quite interesting to see the expression upon the face of the one most interested, usually a smile and a shrug of the shoulders.

The Indian shows very few physical signs of hookworm disease; in fact, the only signs were among the young children, who showed the typical protruding abdomen, and slight oedema in some advanced cases. The adult seems to have developed a relative immunity to the disease, for in no way do they show the results. As a matter of fact, they seem a race to whom fatigue is unknown. It is no uncommon sight to see an Indian with a hundred-pound pack upon his shoulder start for his camp some fifteen miles distant. I have seen, when on a hunt for fresh meat, Josie Billie, after a walk of several miles through the big swamp, shoulder a buck weighing at least one hundred pounds, and walk back to the camp without resting, when I, without any pack, and with only my six-pound rifle, would almost drop on the way. I demonstrated the ova in a specimen from Josie Billie, and treated him. I mention this simply to illustrate my previous statement.

In a very short time I exhausted my supply of thymol capsules and decided to make a special trip to Fort Myers to obtain more supplies. I expressed my desire to take a boy to Fort Myers with me, but at first it met with no response; however, the morning of leaving, Billie Konipatchie came to me and said, "Think so my boy Wilson Billie he go with you," so Wilson Billie and I made the trip of one hundred and forty miles together, being on the road six days, and neither of us able to understand the language of the other. While in Fort Myers he occupied the same room with me, slept in a bed for the first time in his life, ate at the same table, and due to his close observation of those around him, made very few mistakes. When going about Fort Myers on business he was my constant companion, never allowing me to get out of his sight. His first visit to the movies was a revelation to him, and words cannot express his delight.

Wilson Billie learned many things upon this trip, some of

which I hope he will continue to practice, such as cleanliness and the care of his teeth, which he seemed to enjoy. I purchased a complete toilet outfit for him, and it seemed to please him very much. I was glad of this opportunity of having one of the younger generation with me. It was an opportunity, I understand, no other man has enjoyed.

In summing up the subject of hookworm among the Seminoles, it is quite evident that the disease is widespread, causing in the adult very few symptoms, but in the young it is no doubt a decided factor in the rather heavy mortality from concurrent diseases.

I made a special effort to discover pellagra among the Indians, but could find no traces. In talking the subject over with Dr. Godden, he informed me that he had not seen anything that could be taken for pellagra during his nine years among the Seminoles.

I had the opportunity of seeing over one hundred Indians. So far as I could learn, and contrary to the reports of other investigators, there are not more than three hundred and fifty left in the Glades, and I believe it is safe to say that pellagra does not exist at the present time. I might add that I talked over the signs and symptoms of this disease with both Billie Konipatchie and his son, Josie Billie, and they also assured me they had not heard of or seen such a condition.

I was able to demonstrate the tubercle bacilli in only one case, that of a brave about thirty years old, who presented himself for treatment for typical tubercular cough, loss of weight, night sweats, etc., which led me to believe I was dealing with pulmonary tuberculosis. Upon physical examination, I was unable to find any cavity in the lung, but the case seemed so suspicious I asked for and obtained a specimen of sputum which I stained and found the bacilli. This was the only tubercular case I saw, or rather, recognized.

Trachoma does not seem to be present—at least I did not recognize any cases.

I was consulted for, and treated, many cases of indigestion. The prevalence of this condition is, I think, due to irregular hours for meals, over-eating, bad condition of teeth, and hookworm infection.

Venereal diseases are not at all prevalent, and the only authen-

tic information I could gather along this line was from Billie Konipatchie, who told me of a few cases among the younger braves, who had contracted the disease when visiting Miami. Little Billie expressed himself in this manner: "Think so Indian boy have it ojus once, no have it now. Indian doctor no savvy, white doctor he savvy ojus. Think so Indian boy go to white doctor he cure him pretty quick."

It was quite evident, if allowed, that the Indian women would soon become drug habitues. One family showed signs of typical hypochondriasis, complained of all kinds of pain in every part of the body, and insisted upon taking medicine for every one. It is unnecessary to add they were not given the medicine, but were talked to firmly but gently, and advised of the bad effects of taking too much medicine.

In conclusion, will give a brief summary of diseases recognized and treated:

Hookworm, ninety cases—seventy-six completed treatment.

Malaria, about six definite cases.

Tuberculosis, one definite case.

Rheumatism and coryza, a number of cases.

Lumbago, one case.

Dysmemorrhea, one case.

Migraine, one case.

Paresis, probably specific in origin, one case.

Surgical, one case. Operated upon under local anesthesiacystic growth on right leg.

Lipoma over left scapula too large to operate upon under local anesthetic. Advised to go into town and have tumor removed in hospital.

Several emergencies, cuts and wounds about feet.

Extraction of teeth, two cases.

Sprains and bruises, number of cases.

The operation for removal of growth, done by Dr. Godden and myself, was, in all probability, the first operation performed upon an Indian in the Everglades, and was watched by a large number, who appeared very much interested. It was quite evident that I had gained their confidence, for the next day the case of lipoma was brought to me (the wife of Billie Konipatchie), and I was urged to undertake the operation. Given better surroundings and skilled assistance, I would have undertaken this operation for the moral effect it would have had.

I left the Everglades December 1st, and arrived in Fort Myers December 4th. I had the pleasure of speaking to but one person during the whole journey.

Having promised to meet some of the Indians at Mr. Storter's store at Everglade, I made the journey by launch from Fort Myers, spent three days there, and saw several Indians who could not make the journey to the mission post. It was very pleasant to renew the acquaintance of Mr. Storter and his family, whom I met four years ago when on my hookworm campaign in Lee County. I want to take this opportunity to thank Mr. Storter for his kindness and help.

I examined a number of specimens for the ova of hookworm obtained from suspected cases among the white children, with all positive results. Mr. Storter was kind enough to agree to distribute treatment packages to all suspected cases, and took a very active interest in the work.

I returned to Fort Myers, and after making final arrangements, left for Jacksonville, arriving there December 21st.

Respectfully submitted,

ERNEST W. DIGGETT,

On Special Service to Seminole Indians.

REPORT OF DR. JAMES M. JACKSON

AGENT OF THE STATE BOARD OF HEALTH, DADE COUNTY.

Miami, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—The time has arrived when it becomes my duty to make a report of the conditions of health as found in Dade County during the past year.

January 24th, 1913, a hack driver of Miami walked into my office in the vesicular stage of smallpox, asking me what the matter was. This man was sent to the Isolation Hospital; remained there twenty-five days, when he was discharged, cured, on February 16th. From that time on until June 30th, there was a certain amount of smallpox in Miami, though it seemed impossible to trace it; and it seemed to me that we had three separate and distinct infections; two of them being among the colored population, and one among the white—the hack driver, above mentioned.

May 1st, I was notified of a suspicious eruption among the colored population at Fort Lauderdale, which I promptly visited, and found, from the best history I could gather, that smallpox had existed among the colored people in Fort Lauderdale since February, 1913, a number of cases having gotten entirely well, and were only diagnostic by the pitting left from the disease. Being such a distance from the Isolation Hospital, I attempted vaccination, and isolation of the patients in their homes, by placarding the houses, and visiting Fort Lauderdale every few days. I thought that now when they knew that the disease was smallpox, it would create a panicky condition among the population; I therefore secured some teams and had the patients transported to the Isolation Hospital at Miami; had the houses disinfected, and a general vaccination, by which means we were enabled to stamp out the disease in a short time.

The last cases occurred June 10th, and were discharged from the hospital on June 30th.

During the fall months there were quite a few cases of dengue in Miami, and Dade County, but within the past few years people have become so accustomed to having a few cases that it causes but little alarm, and only the most severe cases are treated by physicians.

About the usual number of cases of diphtheria have been introduced, and an occasional case of scarlet fever, but with careful isolation there has been no spread, nor any alarm from any of these cases.

During the past year the City Council of Miami has passed very good ordinances for the health of the city, which has the approval of the Mayor, and now only requires a few other ordinances to be passed to make it effective. And I believe that this health board will add a great deal to the health of the citizens of Miami; and most of all gather in an accurate account of the vital statistics, which alone will be worth the money expended, but which will by no means be all the duties of the Board of Health.

Education along sanitary lines is becoming more and more general, and the screening of homes, stores and almost all houses against flies and mosquitoes, and thus preventing the noticeable spread of the disease, as it was a few years ago.

I am more convinced each year that one of the greatest goods that can come from the working of the State Board of Health, or any health organization, will come through a publicity campaign, which you are conducting so well through the Florida Health Notes and the public press.

In both my work for the State Board of Health and my private practice, I notice that the people are reading and digesting articles written along sanitary lines, and are becoming much aroused as to the carrying out of proper sanitary conditions.

Dade County, on the whole, has enjoyed a most healthful year, and her population has increased very rapidly; and a large lot of her population coming from the far Northwest, we would naturally expect the introduction of a good many diseases, but from none of

these introductions have we had any spread so as to at any time cause alarm.

Very respectfully,

JAMES M. JACKSON, M. D.,
Agent of the State Board of Health.

REPORT OF DR. D. G. HUMPHREYS

AGENT OF THE STATE BOARD OF HEALTH, NASSAU COUNTY.

Fernandina, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to enclose herewith my annual report for 1913. Health conditions have been very much better in Nassau County this year than last; malarial and other fevers were mild in type. The people are waking up to the necessity of screens and, whereas a few years ago screened houses were the exception, now they are the rule; those who find it too expensive to screen the whole house, have screened the bed rooms and dining rooms, thus showing the good work of "Health Notes."

The City Board of Health, under Dr. J. L. Horsey, has been active in draining cess pools and breeding places for mosquitoes.

No cases of smallpox were reported, and as the county was very thoroughly vaccinated in 1910-11, any wandering cases that may have stopped, caused no spread of the disease, therefore were not reported.

Ten cases of diphtheria and two of scarlet fever were reported, all of a mild type. During the latter part of the year we had an outbreak of measles and whooping cough, but no severe cases. There were only a few cases of typhoid fever, and these were mild in type and traceable to outside infection.

Hookworm disease is very rare, only seen in the most isolated sections of the county, our people having taken advantage of treatment long ago.

Tuberculosis, as far as ascertainable, is about the same as in 1911-12, almost entirely confined to the colored race, and while they are being educated along these lines, they continue to sleep without ventilation.

Fernandina has a splendid sewerage system and pure water and sanitation is being pushed by the Board of Health, assisted by the ladies of the Civic League. All in all, I think we have a bright outlook for 1914. Fernandina has entered most heartily into the matter of vital statistics, and I most sincerely hope to see our State come to the front in this matter.

Respectfully,

D. G. HUMPHREYS, M. D.,
Agent of the State Board of Health.

**REPORT OF
DR. RAYMOND C. TURCK**

**Surgeon in Charge of the Work Under the
"Crippled Children" Act.**

REPORT OF DR. RAYMOND C. TURCK

SURGEON IN CHARGE OF THE WORK UNDER THE "CRIPPLED CHILDREN" ACT.

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit the following report of the orthopedic work done under direction of the State Board of Health during the year 1913.

There were handled during the year ending January 1, 1914, twenty-five patients, as follows:

Carried over from 1912	4
Admitted to Hospital	15
Examined, not admitted	3
Treated in office	3
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Total, (white 22; colored 3)	25
Under treatment January 1, 1914	14
In hospital Jan. 1, 1914 (St. Luke's 7; Brewster 2)	9
The patients presented the following pathologic conditions:	
Ankylosis (Elbow 1; hip 1)	2
Arthritis (non-tubercular)	2
Club foot (Talipes varus 10; Tal. Equinovarus 3; Tal. Equinus 1)	14
Fracture (ununited; Femur 2; Humerus 1)	3
Fracture (Simple; Humerus 2)	2
Genu Valgum	1
Osteomyelitis (Tibia 2; Femur 1)	3
Poliomyelitis Paralysis (Lower extremity 2; trunk 1)	3
Spastic Paralysis (Lower extremity 3; Upper extremity 4; Trunk 3; Head and neck 2)	12
Synovitis	1
Tuberculosis of joints (Ankle 1; Knee 2; Hip 2)	5
Tuberculosis of spine	2
Ulcer (leg)	2
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Total	52

It will be noted that more than twice as much work was done in 1913 as in 1912. This increase is, in a measure, satisfactory, and under similar conditions the work should continue to increase, as the ultimate results become more generally known, since each cured condition or corrected case of deformity returned to a community is a concrete example of the possibility of the restoration of the indigent crippled children of this State, and is invaluable in instilling confidence in doubting or timid parents.

Parental neglect, through ignorance, fear of operation, dread of painful treatment, or lack of funds, has produced the extreme types of neglected deformity that thus far the great majority of our cases have presented.

I would respectfully suggest that some work be done toward educating people to the fact that the preventive treatment of deformity, particularly the deformity following tuberculosis of bones and joints and the various paralyses, is the best treatment, and that in any event before refusing treatment, parents must look beyond the inconvenience, discomfort, and possibly the pain of the present, to the future of the neglected, hopelessly deformed child. They should be taught to compare a life-time of incapacity and distress, both physical and mental, to the few short months of treatment which might result in a useful, capable, healthy citizen.

We could do a great deal more had we the proper facilities for the care of these cases. We need an orthopedic hospital; we particularly need a kindergarten and gymnasium with facilities for the treatment or prevention of deformity in its incipiency, the time when the best permanent results are to be obtained; the same equipment is just as valuable in the after-treatment of operative cases.

During the past year we have returned children to their homes untreated, because we did not possess adequate equipment; we have refused to receive a number of others for the same reason.

In certain types of cases, particularly the old neglected contracture deformities, too often we see our best work left incomplete, or see our good results relapse to their former condition because of lack of an adequate gymnasium and a trained gymnastic teacher. We need a hospital where we can properly care for our cases long enough to complete our work, to not only thoroughly correct deformity, but build up bodies and minds.

In practically all cases of bony deformity, after the operative work on bones or joints, it is necessary to develop the muscular and nerve structures to not only provide for useful limbs, but to prevent a relapse to the pre-operative condition.

Of our cases in hospital at present, but one can read, and this is not because of mental defectiveness, but because these children have not been able to attend school on equal terms with sound children. Again, in many orthopedic cases, particularly the spastic paralyses, there is mental deficiency which requires special training; while correcting the physical ills, the mind should be developed. I would add, too, to our hospital equipment something in the line of manual training, such as carpentry and other handicrafts for the boys, sewing, basket-weaving, drawing, etc., for the girls.

From an economic standpoint only, the conversion of twenty dependent cripples into strong, self-sustaining, useful citizens, would justify the State in building an orthopedic hospital and maintaining it for ten years.

The new St. Luke's Hospital will open in January, 1914; it will be complete and modern in every particular, "up to the minute" in every detail, save the one that complete and permanent provision for the children has yet to be made. It is hoped that some time in the near future a children's ward will be erected to provide for the general medical and surgical diseases of infancy and childhood, but even that will not fulfill all the special requirements of this work. The treatment and physical training of orthopedic cases should be carried on in special wards, that the exercises, kindergarten work, rest periods, etc., may be regulated without interfering with or interference from the general medical and surgical patients.

Since the Legislative act authorized the expenditure of twenty thousand dollars for the purchase or erection of a hospital for indigent crippled children, I would suggest that the State erect a ward for its crippled children in connection with the new St. Luke's Hospital on some such basis as the city of Jacksonville provided a ward for contagious diseases. The advantages of such an arrangement would be many. The State could care for its children under ideal conditions, and at a minimum of expense. Certainly the cost would not be more than one-third the amount required to maintain

a separate hospital. To operate a separate hospital and to provide the same efficiency in supervision, nursing, operating room, attention of house doctors, etc., as would be furnished by St. Luke's would not be possible under double the present yearly appropriation.

In accordance with your request, I am submitting herewith sketches of plans for such a ward in connection with St. Luke's, which could be erected and furnished at a maximum cost of \$20,000.00, and which would be sufficient for the needs of the State cases for a number of years to come.

In this connection, I beg to call your attention particularly to the accompanying photographs of some of our cases. Please note the condition of the children before entering St. Luke's—practically every one of them with the sign of the helpless, hopeless, cowed cripple, not one but with his pitiful story written in every feature and every glance; many with hookworm, and almost all with the pallor and lassitude of anemia. Compare these photographs with some of the healthy, robust, rosy, hopeful, happy children leaving the hospital; that is the best report that I can make of the care received by the children in St. Luke's.

This report would be incomplete without mention of the invaluable service rendered by Miss Mary A. Baker, Superintendent of St. Luke's Hospital. Much of the improvement shown in these children has been due to the intense interest manifested, the loving and faithful care given and the constant attention shown by Miss Baker. She has been more than an efficient supervisor of their treatment; she has been a nurse in every sense of the word, a mother, a big sister, a friend and a teacher to the children. She has taught them patience, fortitude, self-control and unselfishness; she has taught them to try to help themselves and to help others; she has installed in them the principles of obedience and courtesy, as well as cleanliness of body and mind.

I wish to acknowledge the efficient and conscientious service rendered these children by my associate, Dr. William Buffalow. I also desire to acknowledge valuable services rendered by Drs. W. E. Ross and J. D. Love, of the medical children's service, Dr. James H. Randolph, of the nervous and mental service, and Drs. W. S. Manning and Norman Heggie, of the eye and nose service of St.

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Figure 25.—Suggestion for orthopedic ward at St. Luke's Hospital, Jacksonville. The second floor to be equipped as a gymnasium and kindergarten, to be of glass in the winter and screened in the summer.

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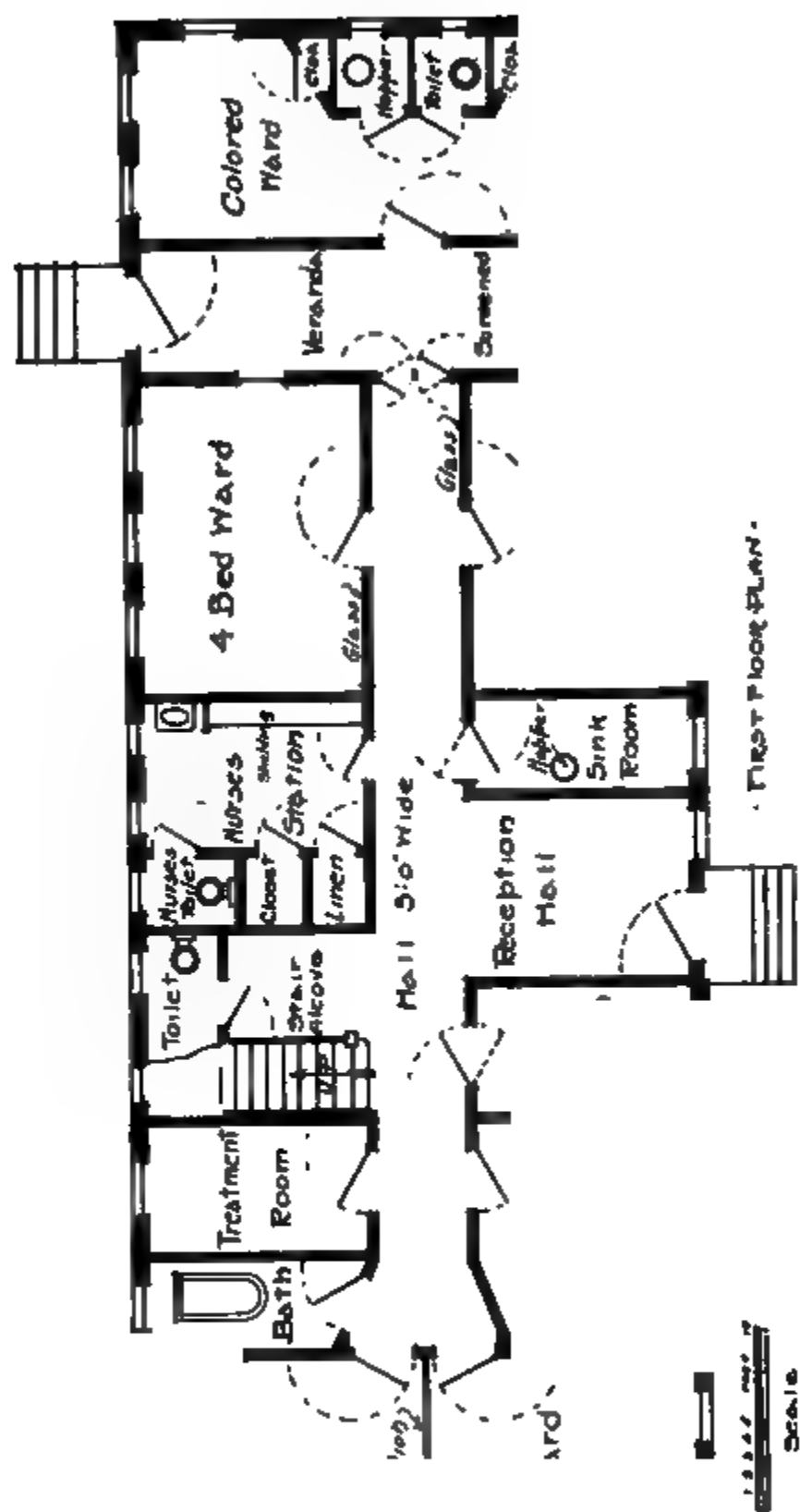


Figure 26.—Suggestion for the floor plan of the orthopedic ward.

Luke's Hospital; also the services of Dr. Graham E. Hensen as to various blood and other examinations.

The X-ray pictures incident to the work have all been taken by Dr. L. W. Cunningham. Dr. Cunningham has practically done the actual work without cost to the State, charging only for the materials used. His most excellent plates, and his interpretation of them have been of great assistance, which is hereby acknowledged.

Finally, I desire to say that my own pleasure and satisfaction in this work has been materially augmented by the consideration, appreciation and helpful interest manifested by the State Health Officer. The indigent crippled children of this State are indeed fortunate in having the means for and the direction of their relief placed in his hands.

Respectfully submitted,

RAYMOND C. TURCK.

The following are brief histories of cases treated during the year 1913:

CASE 1. I. A., white male, age two years, Lulu, Fla. Admitted June, 1912, with double congenital club foot. Operated at St. Luke's Hospital in June and August, 1912. Following operation treated in plaster until May, 1913, when shoes and braces were fitted and the child returned to his home with feet perfectly straight and strong. Case has been under observation since.

CASE 2. P. A., white male, age four years, Greenville, Fla., referred by Dr. J. F. Mixson of Greenville, in December, 1913, with acute synovitis of the knee and ankle, accompanying tuberculosis of the joints. Right knee was flexed at an angle of 45 degrees; now under treatment in extension traction.

CASE 3. B. A., white male, age two years, Dukes, Florida, referred by Dr. W. E. Middleton, Worthington, with congenital club foot; child had never walked. Operated in November, 1912, and February, 1913, at St. Luke's Hospital. Treated in plaster until April, 1913, when shoes and braces were applied and child returned to its home with foot in excellent condition. Figures 1 and 2.

CASE 4. R. A., female, white, age five years, Micanopy, Fla. Referred by Dr. E. B. Howell, Micanopy, in January, 1913, with spastic paralysis both lower limbs, right upper extremity, trunk and face. Owing to the fact that we did not possess equipment and facilities necessary to treat such cases this child was returned to her home.

CASE 5. V. A., white male, age seven years, Christina, Fla. Referred by Dr. C. C. Pearce, Christina, Fla. This boy had infantile paralysis at five years; following this there was a flexion contracture of both thighs with flaccid paralysis of the legs and marked lateral curvature of the spine; both

thighs were rigidly fixed at an acute angle with the trunk. The child walked like an animal—(Figure 3), could not stand erect nor maintain body in erect position. Operation July 8th, 1913, St. Luke's Hospital under ether anaesthesia. All contracted tendons and muscles were cut, the limbs straightened and a double plaster spica was applied with the thighs in extension and abduction. Case has since been treated in plaster cast together with daily massage, manual Swedish movements and exercises. Partial correction October, 1913, shown in Figure 4. Condition January 1st, 1913, with child in plaster spinal jacket and braces is shown in Figure 5. Case still in hospital.

CASE 6. C. B., white male, age ten years, Jacksonville, Fla. Admitted St. Luke's Hospital, October, 1912, with ununited fracture middle third left femur. Report of condition and operation given in annual report State Board of Health 1912. The primary condition, subsequent progress and final result of this case is shown in Figures 6, 7, 8, 9. Case discharged thoroughly healed with sound bony union and a useful limb February, 1913.

CASE 7. J. B., white male, age fourteen years, Trenton, Fla. Admitted St. Luke's Hospital March 14, 1913, with ununited fracture of the left femur of nine weeks standing. X-Ray Figure 10. This shows great outward deformity, overlapping and nonunion. Operation, March 22nd, 1913, St. Luke's Hospital under ether. The old ragged callus was removed, the bones then freshened and approximated with a four screw Lane plate. Wound healed without difficulty. Sent home May, 1913, in good condition with sound bony union and a useful limb. Radiograph showing bony union solid with Lane plate in place shown in Figure 11.

CASE 8. R. C., white male age seventeen years, Jacksonville, Fla. Admitted to St. Luke's Hospital in October, 1913, with an old marked kyphosis from tuberculous spine, dating from three years of age. Two abscesses leading from the diseased bone area had been previously opened and radiograph revealed destruction of three thoracic vertebral bodies. There was paralysis of the lower extremities which began September 13th, 1913; treated in extension; discharge of pus through old wound November 17th, 1913; sinus injected with bismuth paste. Still under observation and treatment: showing marked improvement in use of limbs.

CASE 9. L. D., white male, age thirteen, Jacksonville, Fla. Referred by Associated Charities, with arthritis of both knee and both ankle joints. Not yet admitted to the hospital.

CASE 10. Baby D., white male, age two months, Quincy, Fla. Referred by Dr. R. F. Godard, Quincy, Fla., with double congenital club foot (talipes equino varus). November, 1913, treated in office. Feet placed in plaster cast and progressive correction in plaster continued.

CASE 11. A. F., white male, age twelve years, Greenville, Fla. Referred by Dr. J. F. Mixson, Greenville, with extensive ulceration of both legs, result of osteomyelitis and periosteitis. Entered hospital with marked pyocyanus infection. Treated until operation October 18th, 1913, St. Luke's, when the ulcerated areas were thoroughly curetted; diseased bone also curetted and chiseled out. Patient still in hospital.

CASE 12. S. F., white male, age sixteen years, Wellborn, Fla. Referred by Dr. P. T. McClellan, Wellborn, with contracture deformity of left knee, hip and wrist, also talipes equinos, the result of congenital spastic paralysis.

This patient also is unable to walk. Operation St. Luke's Hospital under ether October 28th, 1913. All contracted tendons and muscles of the left lower limbs were divided, the position of the foot was corrected and the limb put in plaster in good condition. Second operation at St. Luke's, under ether, November 19th, by Dr. William Buffalow. Tenotomies of all flexor tendons controlling the wrist and fingers; hand and arm in plaster. Leg cast renewed. Patient still in hospital.

CASE 13. M. G., white female, age eleven years, Jacksonville, Fla. Admitted to St. Luke's Hospital in 1912 with tuberculosis of the left knee joint and ununited fracture, involving the right elbow joint. Preliminary report in Annual Report, State Board of Health, 1912. Continued observation and treatment of tubercular knee joint during 1913. Joint greatly improved; process apparently entirely cured, giving the child a flexible and useful limb. Patient has in addition an almost perfect elbow with ninety degrees of motion. Figures 12-13.

CASE 14. W. G., white male, age three years, Bartow, Fla. Examined in November, 1913. Case of spastic paralysis involving upper extremities and back. Not admitted to hospital because of lack of proper equipment and facilities.

CASE 15. R. H., white female, age fourteen years, Williston, Fla. Admitted St. Luke's Hospital February, 1913, with spastic paralysis general in all limbs and slightly in muscles controlling head. There were no deformities and no permanent muscular contractures. This patient was returned to her home because she could not be provided with proper treatment.

CASE 16. C. K., white male, age six years, Fenholloway, Fla. Admitted St. Luke's Hospital October, 1913, with double congenital club foot (talipes equinovarus--neglected type). Figure 14. Operation St. Luke's Hospital under ether October 28th, 1913. Tenotomies were done on both tendo Achilles and cuneiform resection of the bones of both feet was done; then feet were put up in plaster in valgus position, Figure 15. The condition January 1, 1914, is shown in Figure 16.

CASE 17. R. L., white male, age ten years, Jacksonville, Fla. Entered St. Luke's Hospital July, 1913, with tuberculosis of the left hip joint in the sub-acute stage. Radiograph revealed involvement of the acetabulum and head of femur. Placed in plaster and such treatment continued. Condition January 1st, 1914, greatly improved; free from pain; process apparently arrested. Still under treatment.

CASE 18. M. L., white female, age nine years, Daytona Beach, Fla. Admitted St. Luke's Hospital in October, 1913, with marked curvature of the spine, the result of tuberculosis beginning at two years of age. Placed in plaster jacket with jury mast extension in the attempt to correct the deformity. December, 1913, developed an acute exacerbation of an old tubercular process in the right lung. Still under treatment in hospital.

CASE 19. F. P., white male, age seven years, Elkton, Fla. Admitted St. Luke's Hospital with double congenital club foot (talipes varus--extreme neglected type) Figure 17. This child was walking almost entirely upon the external ankles. Operation on right foot February 4th, 1913, St. Luke's Hospital under ether. Tenotomies and cuneiform osteotomies of metatarsals and foot put in plaster. Operation on the left foot similar to that done on the

right at St. Luke's March 18th, 1913. The progress and final result of this case are shown in Figures 18, 19, 20. Child returned to his home in July, 1913.

CASE 20. J. P., colored male, age two years, Jacksonville, Fla. Admitted to Brewster Hospital in October, 1913, with double congenital club foot (talipes equino varus) Figure 21. Operation at Brewster Hospital October 27, 1913, under ether; tenotomies and osteotomies both feet. Placed in plaster cast in valgus position. Figure 22. Case discharged from hospital but still undergoing office treatment with progressive plaster cast.

CASE 21. F. P., white female, age ten years, Jacksonville, Fla. Admitted St. Luke's Hospital 1913 with tuberculosis of the left hip joint of five years' duration. The process has been apparently healed but was sub-acute upon admission. There was ankylosis of the hip joint, the thigh being fixed at an angle of forty-five degrees. Patient still in hospital; acute condition subsided.

CASE 22. B. S., colored male, age two years, Jacksonville, Fla. Congenital double club foot (talipes equino varus) relapse from neglect after correction) Figure 23. Report in Annual Report State Board of Health 1912. Operation Brewster Hospital October, 1913, under ether. Cuneiform resection metatarsal bones of both feet. Feet placed in plaster in valgus position (Figure 24). Patient still under treatment.



Figure 1.—B. A. Right club foot (talipes equino varus.)

Figure 2.—B. A. In adjustable shoe after correction by operation and treatment in plaster casts.

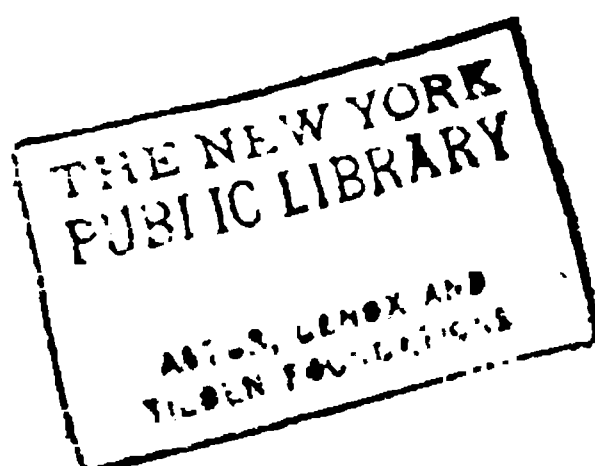


Figure 3.—V. A. Deformity following infantile paralysis. Thighs could not be extended. Child walked as shown in illustration; could not stand erect.

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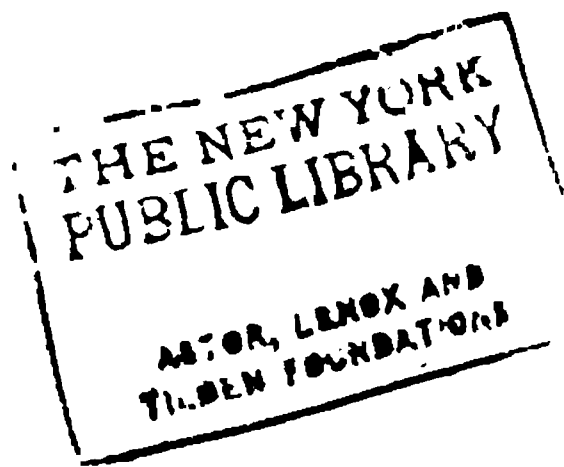


Figure 5.—V. A. In braces with legs straight. Child able to walk in erect position with assistance after six months' treatment.

[illegible]

Figure 6.—C. B. X-ray photograph showing ununited, overlapped, infected fracture of the left femur. The result of several operations following a compound fracture, which operative work was done before the patient was placed under the care of the surgeons acting for the Florida State Fund.

Figure 7.—C. B. X-ray photograph showing diseased bone areas removed, the infection arrested; bone healed with sound union. The light spots in this picture are due to imperfections in the plate.






Figure 8.—C. B. Two months after operation, showing limb held in abduction by plaster cast.

Figure 9.—C. B. Final result four months after operation. Wound healed; limb sound, strong and straight; function perfect.

Figure 10.—J. B. X-ray photograph showing an ununited, overlapped fracture of the femur with great outward deformity, the result of treatment in a straight splint.

Figure 11.—J. B. X-ray photograph showing bone in perfect position held with a four-screw Lane plate. Union sound; wound healed. This picture was taken two months after operation and shows the two lower screws beginning to loosen.

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Figure 12.—M. G. X-ray photograph showing an ununited fracture of the humerus immediately above and involving the elbow joint. The arm was fixed at the angle shown in the picture. There was not more than five degrees of motion; function was lost.

Figure 13.—M. G. X-ray photograph showing result after the humerus had been replaced and held with two loops of silver wire. External wound healed; bony union sound. The child at this time had regained strength in her arm and had ninety degrees of motion in the elbow joint; function entirely restored.

1921

Figure 14.—C. K. Double club foot.
Neglected type.

Figure 15.—C. K. In plaster cast
after operative correction.

Figure 16.—C. K. Showing position and condition of feet three months
after operation. Attention is called to the improved appearance of this child
after three months' treatment in St. Luke's Hospital.

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Figure 17.—F. P. Extreme type of neglected double club foot. It will be noted that this boy walked practically on his outer ankles.

Figure 18.—F. P. In plaster casts after first operative correction.



Figure 19.—F. P. In corrective braces and shoes four months after operation.

Figure 20.—F. P. Showing condition and position of feet after the plaster casts were removed.

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Figure 21.—J. P. Double club foot before operation.



Figure 22.—J. P. In plaster casts 6 weeks after operation.



Figure 23.—B. S. Double club foot. Relapse from parental neglect after operation on tendons and correction in plaster.



Figure 24.—B. S. In plaster cast after operations upon the bones of the feet.

10/10/10

**REPORT OF
BOARD OF EMBALMERS' EXAMINERS**

DR. JOSEPH. Y. PORTER, CHAIRMAN;
DR. HENRY HANSON.

Jacksonville, Fla., January 1, 1914.

To the President and Members of the State Board of Health:

The report of the Board of Embalmers' Examiners is submitted herewith. During 1913, one examination was conducted, at which time licenses were granted to four applicants.

By the examination and licensing of embalmers, it is possible for the State Board of Health to effect a compliance with its rules governing the transportation of the dead.

JOSEPH. Y. PORTER,
Chairman, Board of Embalmers' Examiners.

On Friday, May 16, 1913, at the offices of the State Board of Health, Jacksonville, in accordance with Rule 61, of the Rules and Regulations of the State Board of Health, conforming with Section 1120, of the General Statutes of Florida, 1906, the Board of Embalmers' Examiners conducted an examination of applicants for license to practice embalming in the State of Florida.

Thirteen persons filed applications as required by Rule 62 of the Rules and Regulations of the State Board of Health, and were admitted to examination.

The following is a revised form of application blank for examination for embalmer's license:

STATE BOARD OF HEALTH OF FLORIDA.

BOARD OF EMBALMER'S EXAMINERS.

APPLICATION FOR EXAMINATION.

I, -----, age ----- years,
 of ----- years' experience in embalming, now actively engaged as
 Embalmer: Assistant to Embalmer: Embalmer's Apprentice, in the city or
 town of -----, street and number -----
 County of -----, State of -----,
 do hereby apply to the Board of Embalmers' Examiners for examination for
 embalmer's license, in accordance with Rules 61 and 62 of the Rules and
 Regulations of the State Board of Health, based upon Section 1120, General
 Statutes of Florida, 1906.

I have actually embalmed under the supervision of a licensed embalmer
 ----- dead human bodies.

I hold license number ----- of State of -----,
 dated -----.

I hold certificate from ----- school of embalming,
 of ----- Date of issuance -----.

I hereby agree to comply with the rules and regulations of the State
 Board of Health governing the transportation of the dead.

Remarks -----

(Signature) -----

STATE OF FLORIDA.

} ss.

-----19
 Subscribed and sworn to before me this ----- day of
 -----19

Justice of the Peace: Notary Public.

The above application must be filled out in handwriting of applicant, and
 signed and acknowledged before a Justice of the Peace or a Notary Public

I hereby certify that ----- is personally
 known to me; that I know h ----- to be of good moral character.

Signed ----- Address -----

Signed ----- Address -----

Signed ----- Address -----

(Licensed Embalmer)

The above certificate of moral character must be signed by three responsible
 citizens, one of whom must be a licensed embalmer personally acquainted with
 the applicant for at least one year. Certificates of embalming schools or licenses

TWENTY-FIFTH ANNUAL REPORT

from other states must be presented to the Board of Embalmers' Examiners on day of examination, if in possession of applicant.

In addition to a written examination, each applicant was submitted to an oral examination, in which Messrs. C. M. Bingham and A. Moulton courteously assisted as examiners. This oral test consisted chiefly of questions in practical and scientific embalming.

The written examination consisted of the following questions:

ANATOMY.

1. Describe the Aorta.
2. The Innominate Artery.
3. The Femoral Artery.
4. Name organs in thoracic cavity.
5. Describe the pulmonary circulation.
6. Name the organs in the abdominal cavity.
7. What arteries supply blood to the brain?

BACTERIOLOGY.

1. What are bacteria? In what part of the body are bacteria always present in large numbers?
2. What shapes are bacteria? Name some of the common, important types.
3. What are the causes of putrefaction and decay?
4. What conditions are necessary for bacteria to grow and multiply?
5. What bacteria cause pulmonary consumption? Typhoid fever?
6. How would it be possible for a body to mummify?
7. What diseases can be successfully vaccinated against?
8. Under what conditions would it be safe for you to handle a body dead of smallpox?
9. What diseases are waterborne?
10. Would a ruptured vena cava be a serious obstacle in embalming a body?
11. What are the ingredients of a good embalming fluid?

RULES.

1. Does the Board prohibit the transportation of certain bodies and why?
2. Under the rules of the Board can a body dead of Asiatic Cholera be shipped?

Eligible applicants who were successful in the examination, and who were granted licenses to practice embalming in the State, are as follows:

H. W. Cowle, Eustis, Fla. -----	License No. 137
Andrew Huff (col.), Jacksonville, Fla-----	License No. 138
F T. Blount, Tampa, Fla.-----	License No. 139
W. D. Carmichael, Melbourne, Fla. -----	License No. 140

BACTERIOLOGICAL LABORATORIES

REPORTS OF

DR. HENRY HANSON, (Central Laboratory)
Senior Bacteriologist.

DR. G. H. SIMON, Bacteriologist, Tampa Laboratory

DR. F. A. BRINK, Bacteriologist; Pensacola Laboratory

REPORT OF DR. HENRY HANSON

SENIOR BACTERIOLOGIST.

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit the following report of work accomplished in the Central Laboratory of the State Board of Health for the year 1913, together with a tabulation showing patronage of the laboratory and distribution of communicable diseases as diagnosed in the three laboratories of the State Board of Health. In this we find that communicable or preventable diseases have been present in one hundred and fifty-five localities in the State. Such diseases have been more prevalent in the large cities, where the number is, on the whole, in proportion to the size of the city, with the exception of the figures given for Tampa and Jacksonville.

The number of specimens received for examination in the Central Laboratory has been the greatest in the history of the State Board of Health. We have had during the year fourteen thousand, five hundred and seventeen specimens submitted for examination, of which we have examined fourteen thousand, five hundred and sixteen; one specimen being unaccounted for. These specimens have been received from two hundred and thirty-eight cities and towns within the State, a tabulation of which is given below. In referring to this tabulation, you will find that thirty-seven towns have submitted only one specimen each; a large number less than ten each, and only fourteen one hundred or more for the year. We cannot give comparative statistics of this kind for previous years, inasmuch as we have not made a tabulation of this nature in the past three years. It will be noted, however, that the larger cities are the ones submitting the largest number of specimens, which is natural enough, in that communicable diseases will be more prevalent in communities where the number of contacts is greater.

Tampa has had one hundred and eighty-four more cases of communicable diseases than has the city of Jacksonville. The significance of this one might attribute, in part, to the difference in the activity of the local Boards of Health. The natural health conditions cannot be so materially different as is indicated from the figures which we are submitting. If one takes the total number of examinations in the two places one will find that the city of Jacksonville has submitted seven thousand, eight hundred and eighty-six specimens for examination, with six hundred and forty-seven positives, as recorded in our tabulation of communicable diseases, while Tampa has approximately the same number, with eight hundred and thirty-one positives. This is accounted for by the higher diphtheria, malaria, typhoid and tuberculosis rate than that for the city of Jacksonville. As far as the State Board of Health is concerned, it offers equal advantages in both cities, or if there is any discrepancy, it is in favor of Tampa, in that the laboratory at Tampa is not required to do so much work, and does not have to respond to the same territory that the Central Laboratory does. Tampa leads in all things except rabies. Jacksonville has had twenty-four more cases of hydrophobia than Tampa.

From the tabulation it would seem that the hydrophobia situation was less serious than formerly, but it is a fact that we have had five deaths in this city during the past year; four of these being otherwise healthy men. The only encouraging feature of the hydrophobia situation is that during the second half of the year after the impounding of dogs was taken out of the hands of the City Marshal, there has been a decrease in the number of dog's heads submitted for examination in this laboratory, as well as in the number of humans bitten. The five cases who have died in Jacksonville have, with one exception, been instances where those bitten failed to take the treatment. The one exception is that of a five-year-old boy, who was so horribly bitten in the hand, arm, face and mouth, that the amount of infection was so great the Pasteur treatment failed to produce sufficient immunity. Of the four men who died, all had neglected to take the Pasteur treatment.

In three of these cases we tried out varying doses and methods of quinine administration, being justified in resorting to such therapy by the reports of Moon,* of Chicago, and Harris,* of St. Louis.

In the first case we clearly gave an insufficient quantity of quinine, and the patient apparently derived no benefit. In the second case, we gave what seemed to be enormous doses. In fact, we gave more than three hundred grains of quinine in three days. In this case it seems that the course of the disease was modified, but the man died on the fifth day. In the third case, where quinine was administered, we gave certain quantities by mouth and other doses by hypodermoclysis. We also gave one intra-spinal dose. The spinal anesthesia which took place in this case temporarily paralyzed the lower extremities, rendering the patient unable to get out of bed or run about and do injury either to himself or the nurses in attendance. The mental effect was striking. This case was the only one where the mental attitude passed from one of pronounced pessimism to one of true optimism. The patient died, however, after the fourth day, and examination of the brain showed the presence of negri bodies.

I reviewed the rabies situation at some length for the State Medical Association last spring, and hoped that this subject might receive sufficient attention from the medical profession to enable us to very decidedly lessen the disease. There has been less of hydrophobia in the State as a whole during the second half of the year than for the same period in 1912. We are receiving more heads from doubtful and negative cases than we formerly did, which indicates that people are becoming more cautious, and are recognizing the seriousness of the disease.

It certainly is a serious matter when people are attacked in their homes by the stray curs running at large. We had an instance of this kind in the highway section of this city last spring. A rabid dog entered a man's house and attacked two of his children, biting both children severely, while they were in the kitchen of their own home. The head of this dog was sent to the laboratory, where we found unmistakable evidence of hydrophobia.

It has been my desire for the past three years to make a study of the virus of rabies with the hope of suggesting some means tending toward its eradication. I might say, parenthetically, that we know what is necessary for the eradication of hydrophobia but from our past experience it seems that our prescription is not accepted. As I have said before it is only necessary to enforce

the muzzling ordinance and the license tax in order to eliminate this disease from the State.

During the past year several investigators have taken up the study of the nature of the virus and have published articles on the subject without any final definite conclusions. Noguchi, in a recent article spoke of certain bodies which have been grown artificially. His findings are not accepted by Dr. Anna Williams, of the New York City Board of Health Research Laboratory, as conclusive that he has succeeded in growing the organisms of rabies. She does not seem to think that he has made it sufficiently clear that he has bodies which are distinctly those of hydrophobia. Dr. Williams has also made certain cultural investigations and has found her research to indicate that the negri bodies proliferate in brains kept in an ice box at such temperatures that the saprophytic bacteria are inhibited in their growth. About a year ago I made some attempt to cultivate the negri bodies on the same plan as that used by Dr. Williams, in certain brains which we found not to be very heavily infected as shown by a microscopic examination. I found on reexamination of the brains kept in the ice box at temperatures of from forty to forty-five degrees Fahrenheit, for periods of four to seven days, that the bodies which before had been very difficult to find on account of their extremely minute size had grown to easily recognizable typical negri bodies. Unfortunately the work had to be abandoned for the reason that all other problems other than the routine work have been abandoned, namely: lack of facilities and sufficient help in the Central Laboratory.

It is impossible to accomplish anything of any special moment in laboratory investigations without an animal house where laboratory animals can be properly cared for. We have attempted to improvise a simple place for keeping inoculated animals but the fence has repeatedly been broken down by stray dogs and the animals have been killed. Some of these animals have been rabbits inoculated with brain material from dogs and other animals suspected of having rabies and which animals had bitten men, women and children. When these rabbits were killed we were unable to render the information which we should be able to give in cases of this kind. It then became necessary to advise the persons bitten that "the only safe thing to do is to take the Pasteur treatment,"

or, "take your chances that the dog was not mad or if it was that you will not develop hydrophobia." For one who has passed through the epizootic here in Jacksonville during the past three years, this is far from satisfactory. It is horrifying to stand at the bedside of persons who have developed hydrophobia when one knows that it is one more death which should have been prevented and that one is absolutely incapable of doing anything to lessen the suffering of the patient or to prevent death. For this reason I do not believe that it is exaggeration to say that the "animal house is as urgent as the microscope in the laboratory, for work of this kind." The original plan of the animal house was revised in such a way as only to ask for the actual needs of such a structure and reduce the expenses. I sincerely trust that this structure can be built in the near future.

DRINKING CUP.

The drinking cup experiments have been fewer than we anticipated. We have not done enough to draw the general conclusion we had hoped to. All we can say so far is that the glasses used at many of the soda fountains are positive conveyors of disease on account of improper cleansing. Much of the material served in these glasses is a good bacteriological medium and has been found to harbor pathogenic bacteria.

DIPHTHERIA CARRIERS.

A wholesale investigation of diphtheria and diphtheria carriers has been conducted by the City Board of Health in the local schools. Approximately two thousand such cultures have been examined by the Central Laboratory during the fall, in which we found a little over three percent of diphtheria carriers among apparently healthy school children.

In Jacksonville we find that there have been one hundred and eighty-nine cases of diphtheria as compared with two hundred and four cases in Tampa. The difference here is not so great on the face as it becomes when one stops to consider how these have been recognized. The City Board of Health in Jacksonville has

made a very vigorous and active campaign in locating diphtheria cases and diphtheria carriers and as a result many cases have been found which otherwise would have gone unrecognized. In Tampa there has been no active campaign and it is natural to conclude that some cases have been missed and if equally active search had been made in Tampa the number would have been greater. In this tabulation we did not include carriers who had no active symptoms of diphtheria.

After returning from Minneapolis last summer I suggested the use of cultures of lactic acid bacilli in salt solution or in whey bouillon as a spray in the throat and nasal passages of convalescent diphtheria patients, and in diphtheria carriers. This I suggested after hearing a report on the use of this method by Dr. Harold Wood, of Rochester, Minn. The spray has been used by a great many of our local physicians, by the medical school inspectors and the school nurses and by a few physicians at various points in the State, especially by Dr. F. C. Moore, at Tallahassee, and Dr. McKinnon, at DeFuniak Springs. The report of results from the last two physicians is not very encouraging and it does not seem that the method is as efficient as we at first hoped it might be. Dr. Terry, however, reported to the Duval County Medical Society that the lactic acid spray had a small margin of advantage over the use of the ordinary chemical antiseptics.

MALARIA.

Out of a total of two thousand three hundred and twenty-nine specimens submitted for examination for malaria in the Central Laboratory, we have found two hundred and fifty-six positive, or approximately eleven percent positive. In this connection I am led to believe that there are too many clinical diagnoses of malaria. The tendency in sub-tropical climates of this kind is to consider nearly every ill malaria, and all persons who become indisposed first think of taking quinine or other chill tonics. The result is that a great many specimens received from true cases result in a negative report on account of such medication. I also believe that a great many of these patients would get well as quick without the use of quinine. Our laboratory examinations do not indicate that

there is any serious increase of malaria in the State. The tabulation of the six principal diseases shows that of two thousand, five hundred and twenty-nine specimens examined in 1910, six hundred and twenty-four were positive, while in 1913, five thousand, six hundred and seven specimens only showed five hundred and one positive.

TYPHOID.

Typhoid fever seems to be on the decrease in the State as a whole. In 1910, there were examined for the State as a whole one thousand, nine hundred and thirty-eight specimens of blood, with five hundred and forty-two positive widals. In 1913, the three laboratories made three thousand, three hundred and ninety widal tests, with only six hundred and four positive.

The typhoid rate for Jacksonville and Tampa shows a much greater discrepancy than any of the other diseases. We note in our tabulation of communicable diseases that in Tampa there have been one hundred and ninety-five diagnosed cases of typhoid, while in Jacksonville there have been only ninety-one, showing one hundred and four more positive widals for Tampa than for the city of Jacksonville.

TUBERCULOSIS.

We are yearly receiving a larger number of specimens of sputum for examination for tubercle bacilli, and are finding a correspondingly greater number of positives. In connection with sputum examinations the point to emphasize is that there are not enough of such examinations made. A great many physicians place too great reliance on a single negative report. A great many of the sputum specimens submitted are not suitable for examination, in that they consist of a small quantity of salivary secretion with bits of mucus from the nasal passage, and do not represent bronchial secretion. Naturally these are negative. Patients should be instructed to try to raise mucus from the lungs when a specimen is submitted for such examination. Otherwise a negative report may afford a false sense of security, in that it does not represent the true state of affairs.

In 1910 we examined one thousand, five hundred and fifteen samples of sputum, and found tubercle bacilli in three hundred and

eighty-five. In 1913, out of two thousand, nine hundred and sixty-four examinations, we found eight hundred and sixteen to show tubercle bacilli; an increase of two per cent.

HOOKWORM.

The number of hookworm specimens submitted has gradually decreased since 1910. This is due to a very large extent to the fact that the physicians of the State are recognizing the disease without laboratory examinations. Also to the fact that many of them are making their own microscopic examinations for hookworm, and I believe that it is also due to the fact that the State Board of Health, through its field men, is not conducting as active a hookworm campaign as it did in 1910. Our hookworm examination for the State is not more than about one-half of what it was in 1910, when we made seven thousand, four hundred and eight such examinations, as compared with three thousand, eight hundred and eighteen for the year 1913.

VENEREAL DISEASE.

We are receiving each year an increased number of specimens to be examined for gonococci, and we note from the tabulation that our examinations for 1913 are practically double what they were in 1910. It seems that this disease, on account of its insidious nature and the serious consequences in latent cases, should be made reportable.

WATER EXAMINATIONS.

We are constantly called upon to examine water for various points in the State, and almost invariably we find the water is negative for sewage contamination. Practically all the water in the State is from artesian wells, and wherever such water is properly collected it is found to be bacteriologically pure. It seems that the only impure water that we have in the State is such water as is obtained from unprotected surface wells. I would, therefore, suggest that it is a waste of time and material to continue making

such water analyses unless there is some epidemiological reason for the examination.

PATHOLOGICAL TISSUES.

We have had ninety-nine specimens of tissues submitted from various pathological conditions, of which we have found twenty-six to be of a malignant nature. The nature of these specimens will be noted at the bottom of page one, of statement of specimens examined.

GLANDERS.

One of the most unusual conditions encountered in our examinations for the year concerns a man who had contracted glanders from a horse. This man contracted this infection by scratching off a piece of skin from his finger on the tooth of a glandered horse. He developed multiple abscesses, cultures from which showed bacilli, and which were proven by animal inoculation to be glanders bacilli. The unusual result in this case is that the man did not die, but developed chronic glanders, from which he has been suffering for several months. This will no doubt be taken up in the report of the Veterinarian.

LABORATORY EXTENSION.

Recently there has been some talk of further extension of the laboratory system in the State on account of the length of time consumed in sending specimens to the laboratory and obtaining reports sufficiently prompt to make such laboratory examinations of proper value. It is true that the southern part of the East Coast is entirely too far from the Central Laboratory to be able to use the laboratory with satisfactory results. The railroad facilities are not such that the East Coast can patronize the Tampa Laboratory with any degree of satisfaction. For that reason it would seem to me appropriate that the State Health Officer should recommend to the Board to establish a laboratory at some point on the East Coast, and it would seem that Miami is the most logical point for such laboratory. A laboratory there could take care of the urgent work as far north as Cocoa. Tallahassee has also made certain

representation tending to show that a laboratory is much needed in that section. Tallahassee has submitted the largest number of specimens of any city in the State outside of those where laboratories are located at the present time. Tallahassee, however, could obtain, for the present, at least, fairly satisfactory results by observing its train schedules when submitting specimens to the Central Laboratory or Pensacola. Miami and the other East Coast towns, on the other hand, cannot patronize the laboratory advantageously on account of the length of time consumed in transit of specimens.

When this matter of extension of the laboratory system comes up one will have to proceed cautiously in order to avoid too much division of energy, and also avoid locating laboratories simply from the standpoint of political favors. I believe it would be unwise to attempt to erect extensive buildings in many points in the State, in that the initial outlay would be unduly expensive, and it would also tend to make the cost of upkeep of the laboratory system too high. It is especially important to centralize effort of this kind as much as possible, and such effort should be made where the need is greatest.

The three laboratories this year have examined twenty-seven thousand, one hundred and three specimens; an increase of ten thousand over 1910. The indications are that the laboratory patronage is going to continue to increase. This work has been accomplished by the same force as that which was severely taxed to examine twenty-one thousand specimens in 1912. This is really more work than can be satisfactorily handled by the present laboratory force within the State.

The personnel of the Central Laboratory consists of Dr. Iva C. Youmans, First Assistant; Dr. W. A. Claxton, Second Assistant. The position of stenographer for the first few months of the year was held by Miss Lucille Dixon. During the summer months, Miss Clara Thompson rendered invaluable service in that position, and at the present time Miss Pearl Griffith is most satisfactorily filling the position. In addition to this, Mr. H. P. Brown, the Sanitary Patrolman of Duval County, has spent the greater part of his time in the laboratory; and in fact, we would have been absolutely unable to accomplish the work reported without his assistance. The two laboratory boys, E. T. Copp and Hugh

Roberts, have had their hands more than full to keep up with such menial work as they have had to do during the past year.

We have been further handicapped with our work in the Central Laboratory for the reason that the Central Laboratory has been called on to supply help during vacation periods in the laboratories at Tampa and Pensacola. This has taken one bacteriologist out of the laboratory for three months out of the year. The work reported seems to me to clearly justify the addition of more skilled help, either a competent technician or a utility assistant.

Dr. Youmans, Dr. Claxton, Mr. Brown and E. T. Copp deserve special mention for their untiring efforts in behalf of the laboratory during the past year.

We have been assisted during July, August, September and October by field men who have been detailed at the laboratory for work, and it is only fair to state that we would have been incapable of carrying on the work without this help from the field men. I am especially indebted to Dr. M. E. Heck, who put in the longest period of service in the laboratory.

In conclusion, I wish to thank the State Health Officer for his ready response to the requests of the laboratory, and for his helpful advice in carrying on the work.

Respectfully submitted,

HENRY HANSON,
Senior Bacteriologist.

STATEMENT OF SPECIMENS EXAMINED
In the Central Laboratory, Jacksonville, Florida, 1913.

MATERIAL EXAMINED	JAN.																	TOTAL	GRAND TOTAL
		87	107	106	130	124	89	98	99	101	76	67	81	78	64	43	42	914	
Animal Parasites:																		1317	
Hookworm:																		12	
Positive	107	106	124	98	101	67	81	78	64	43	42	914							
Negative																			
Unfit																			
Amoeba	3	2																	
Ascaris	5	4																	
Lambliæ																			
Oxyuris	1																		
Strongyloides																			
Tapeworm	4	6																	
Trichiuris	4	2																	
Diphtheria:																			
Swabs:																			
Positive	11	12	8	22	21	12	13	35	23	14	4	181							
Negative	37	43	22	53	43	46	34	69	99	105	36	629							
Doubtful	17	9	1	16	6	10	10	16	31	24	8	167							
Cultures:																			
Positive	18	24	20	57	91	48	29	85	148	113	50	694							
Negative	57	50	34	62	159	160	75	198	1602	629	358	3349							
Doubtful	3	3	1	8	9	5	18	18	87	11	10	181							
Gonorrhoea:																			
Positive	10	17	19	19	6	14	11	15	15	23	14	188							
Negative	23	12	12	12	27	13	15	16	20	16	20	202							
Doubtful	1	2	1	1	6	5	6	9	3	4	8	52							
Malaria:																			
Positive	15	24	25	15	34	24	28	37	18	12	7	256							
Negative	124	108	132	159	181	203	159	217	204	119	138	1928							
Doubtful	16	19	15	9	14	28	12	5	3	7	2	146							
Pathological Specimens:																			
Chorio-Epithelioma			2																

*Carcinoma	1	---	1	3	1	2	1	1	1	2	3	2	---	16
†Sarcoma	---	---	1	1	1	---	1	1	---	---	---	---	---	8
Fibroma	---	---	---	---	---	1	---	---	---	---	---	---	---	1
Goitre	---	1	---	---	---	---	---	---	---	---	---	---	---	1
Hypertrophic Glandular Endometritis	---	2	---	---	---	---	---	---	---	---	---	2	---	4
Myo Fibroma	---	---	---	---	---	1	---	---	---	---	---	---	---	1
Normal Skin	---	1	---	---	---	---	---	---	---	---	---	---	---	1
Placental Tissue	---	1	---	---	---	---	---	---	---	---	---	1	---	2
Syphilis	---	---	---	1	2	1	---	---	---	---	---	---	---	4
Veruca	---	---	1	1	---	---	---	---	---	---	---	---	---	1
Unclassified	5	4	4	6	2	4	4	6	3	4	10	4	6	58
Rabies:														99
Dog, Positive	3	9	8	12	5	9	5	4	---	---	---	2	2	59
Dog, Negative	2	1	3	1	2	4	2	4	5	4	---	4	2	30
Dog, Doubtful	---	---	2	1	2	2	1	---	1	---	---	---	1	10
Rat, Positive	---	2	---	---	---	---	---	---	---	---	---	---	---	2
Cat, Positive	---	---	---	---	---	1	1	1	---	---	---	2	---	5
Cat, Negative	---	---	1	---	---	---	---	---	---	---	1	1	---	3
Cat, Doubtful	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Cow, Positive	---	---	---	1	---	---	---	---	---	---	---	---	---	1
Chicken, Doubtful	---	---	---	---	---	---	1	---	---	---	---	---	---	1
Human, Positive	---	---	---	---	---	---	---	1	---	---	---	---	---	1
Squirrel, Doubtful	---	---	---	---	---	---	---	---	1	---	---	---	---	3
Fox, Doubtful	---	---	---	---	---	---	---	---	---	---	1	---	---	1
Hog, Doubtful	---	---	---	---	---	---	---	---	---	---	1	---	---	1
Tuberculosis:														119
Positive	50	39	35	54	42	35	19	25	30	40	38	40	37	444
Negative	132	118	102	107	103	108	96	73	64	105	61	93	26	1192
Unsatisfactory	4	---	6	1	1	3	5	6	1	3	4	1	1	35
Typhoid:														1671
Positive	12	33	30	21	22	26	31	31	26	24	19	24	301	301
Negative	75	84	78	83	119	133	140	135	119	57	135	57	82	1240
Incomplete	5	6	7	10	16	19	11	8	14	5	6	5	7	114
Para-Typhoid, Negative	---	---	1	---	---	---	---	---	---	---	---	---	---	1
Urinalysis	1	5	10	7	9	2	8	8	12	11	9	11	9	91

STATEMENT OF SPECIMENS EXAMINED.—(Continued).

MATERIAL EXAMINED	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.	TOTAL	GRAND TOTAL
Water (For Sewerage Contamination)														
Positive -----	---	---	2	---	3	---	---	6	---	---	1	2	14	
Negative -----	---	5	28	---	8	12	6	10	10	7	1	4	91	
Doubtful -----	---	---	---	4	---	1	---	---	---	---	1	---	6	111
§Miscellaneous:														
Animal Inoculation -----	---	---	4	---	3	1	---	---	---	---	---	3	11	11
Autogenous Vaccine -----	1	3	2	---	---	2	---	3	2	1	---	---	14	14
Blood Count:														
Differential -----	3	4	4	3	5	3	5	8	10	1	2	7	55	58
Plain -----	---	2	4	5	1	3	5	---	---	---	3	---	23	
Leprosy:														
Positive -----	---	1	---	---	---	---	---	---	---	---	---	---	1	
Negative -----	---	---	2	---	---	3	5	---	---	---	---	---	10	11
Ophthalmia:														
Positive -----	---	---	---	1	---	---	2	---	1	1	---	---	5	9
Negative -----	---	---	---	---	1	---	---	---	---	1	2	---	4	
Spinal Fluid -----	1	1	---	1	1	1	2	---	---	---	---	---	7	
Spirochaete Pallida:														
Positive -----	---	---	1	1	1	---	---	---	---	3	---	1	7	
Negative -----	---	---	---	1	---	---	3	---	---	---	---	---	4	11
Vincent's Angina -----	---	---	---	---	---	---	1	---	3	---	1	2	7	
Unclassified -----	23	34	19	8	126	6	10	9	23	13	5	4	280	280
Totals -----	860	880	1020	873	1128	1173	1139	951	1237	2688	1488	1079	14516	14516

*All Epitheliomas and Carcinomas are classified under general heading carcinoma, which includes 3 Adeno Carcinoma, 2 Squamous celled carcinoma, 1 Basal celled Carcinoma, 1 Carcinoma of Liver, 1 Metastatic Carcinoma. 3 Epitheliomas, and 1 Rodent Ulcer.

†Under the general heading Sarcoma there is 1 Angio-sarcoma, 4 spindle celled sarcoma and 1 round celled Sarcoma.

§Included under miscellaneous unclassified is 1 Filaria, 1 Diazo, 1 Cholera, 2 Subtilis, 2 Pus Staphylococcus, 1 Synovial Fluid, 3 Glanders, 2 Pleural Fluid, 1 Abcess Fluid, 1 Seminal Fluid and 1 Erysipelas.

**DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED BY
THE LABORATORIES OF THE STATE BOARD OF
HEALTH FOR THE YEAR 1913**

Towns	Diph.	Malaria	Typhoid	Tuberc.	Rabies	Amoeba	Leprosy	Total
1 Alachua				5	2			7
2 Alton				1				1
3 Apalachicola	9		5	1				15
4 Arcadia	6	5	10	7				28
5 Archer	1		2					3
6 Auburndale					1			1
7 Bartow		2	3	7	2			14
8 Bellaire		1						1
9 Blichton			1	1				2
10 Blountstown				1				1
11 Boca Grande	1		1	1				3
12 Bonifay	2							2
13 Bowling Green					1			1
14 Boynton	2		1	1				4
15 Bradentown	4	2	2	1				9
16 Bradley Junction		1						1
17 Brewster			1					1
18 Bronson	1		1	1				3
19 Brooker			1	1				2
20 Brooksville				2				2
21 Bunnell			1					1
22 Bushnell			8	1				9
23 Campbellton			1					1
24 Caryville	1							1
25 Cedar Keys	1			3				4
26 Chattahoochee	1							1
27 Chipley				2				2
28 Christina	2			3				5
29 Citra				1				1
30 Clearwater		3	3	4				10
31 Cocoa		1	1	4	1			7
32 Coleman		1	1					2
33 Crescent City		8	1					9
34 Crystal River	2							2
35 Dade City		1	8	2				11
36 Daytona	2	4	13	6				25
37 DeFuniak Springs	22			1	2			25
38 DeLand		1		1				2
39 Delray	13		1	2				16
40 Dinsmore					1			1
41 Dowling Park			4					4
42 Dunnellon		1						1
43 Emporia				4				4
44 Eustis	2			1				3
45 Fellsmere				1				1
46 Fernandina	7		1	1				9
47 Floral City	1	2						3
48 Freeport	1							1
49 Frostproof					1			1
50 Fort Dade			1					1

DISTRIBUTION OF COMMUNICABLE DISEASES—(Continued).

Towns	Diph.	Malaria	Typhoid	Tuberc	Rabies	Amoeba	Leprosy	Total
51 Fort Green			1					1
52 Fort Meade		1	1	4	2			8
53 Fort Myers		1	4	5				10
54 Fort Ogden	1							1
55 Fort Pierce	1	1		7				9
56 Fort White	1			1				2
57 Gainesville	28	7	9	18	7			67
58 Gothe			1					1
59 Grandin			1					1
60 Green Cove Springs	1		6					7
61 Greensboro		1	1					2
62 Greenville	1	1	1					3
63 Greenwood			1					1
64 Hampton	1	1		2				4
65 Hawthorne		1	1					2
66 Hawks Park				1				1
67 Hernando				1				1
68 Hilliard			1					1
69 Holder			1					1
70 Holt			3					3
71 Hosford		1	1					2
72 Hudson				1				1
73 Inverness			1					1
74 Jacksonville	189	151	86	182	34		1	643
75 South Jacksonville	1		2	2				5
76 Jasper					2			2
77 Jennings					1			1
78 Kathleen		1		1	1			3
79 Key West			1	6				7
80 Kissimmee				4				4
81 Lake Butler	4	2	14	1				21
82 Lake City		1	2	1				4
83 Lake Worth	3							3
84 Lakeland	14	6	9	4	1			34
85 Leesburg		1	2	4				7
86 Lemon City				3				3
87 Limestone					1			1
88 Live Oak	3		5	1				9
89 Lloyd				1				1
90 Loughman		1	1					2
91 Lulu			2					2
92 Madison	1							1
93 Manatee	4			2				6
94 Mandarin		1		1				2
95 Marianna	32		1	1				34
96 Mayo			1	1				2
97 Macclenny				1				1
98 Miami	2		2	5				9
99 Micanopy		2	2					4
100 Miccosukee		1						1
101 Milton	3		5	2				10
102 Millvale	4			1				5
103 Morriston	1		2					3

DISTRIBUTION OF COMMUNICABLE DISEASES—(Continued).

Towns	Diph.	Malaria	Typhoid	Tuberc.	Rabies	Amoeba	Leprosy	Total
104 Monticello				2				2
105 Mulberry	1			3	1			5
106 Myrtle			1					1
107 Newberry			1	2	1			4
108 New Smyrna	1			3				4
109 Ocala	5	5	7	4				21
110 Orlando	4	13	16	32				65
111 Otter Creek		1	2					3
112 Ozone		2						2
113 Palatka	1	1		13				15
114 Palmetto	5	1		2				8
115 Panama City	1							1
116 Parrish					1			1
117 Pensacola	35	41	17	94		7	1	195
118 Pine Mount			1					1
119 Plant City	18	14	21	11	1			65
120 Port Inglis			1					1
121 Port McCoy			1					1
122 Port Orange				2				2
123 Port St. Joe				1				1
124 Punta Gorda			2	1				3
125 Quincy	2	1		3				6
126 Raiford			2					2
127 River Junction	1							1
128 Safety Harbor			1					1
129 San Antonio			1					1
130 Sanford	12	2	3	1				18
131 Sarasota	2		1	4				7
132 Starke	1	2	4		1			8
133 St. Andrews Bay						1		1
134 St. Augustine	8	3	1	4				16
135 St. Petersburg	2		1	6				9
136 Tallahassee	47	14	26	17	1			105
137 Tampa	204	176	195	220	10	11	1	817
138 Port Tampa	1		1	3				5
139 West Tampa	2			3				5
140 Tarpon Springs				1				1
141 Tiger Bay					1			1
142 Titusville	1	14	3	1				19
143 Trenton			1		1			2
144 Trilby				1				1
145 Umatilla			1					1
146 Wauchula	2		10	4				16
147 Webster				1				1
148 Welaka				1				1
149 West Palm Beach	5		1	4				10
150 Wewahitchka				1				1
151 Wilcox					1			1
152 Wildwood	1	1						2
153 Williston	2							2
154 Winterhaven	1							1
155 Worthington			1	2				3
Totals	739	506	566	777	80	19	3	2690

**COMPARATIVE STATEMENT OF THE SIX PRINCIPAL DISEASES
FOR WHICH EXAMINATIONS HAVE BEEN MADE IN THE
THREE LABORATORIES FROM 1910 TO 1913.**

	Jacksonville		Tampa		Pensacola		Total	
Diphtheria:								
1910: Total Examinations---	389		147		22		558	
Positive Examinations		113		35		13		161
1911: Total Examinations---	389		344		99		832	
Positive Examinations		111		75		23		209
1912: Total Examinations---	890		649		112		1652	
Positive Examinations		310		223		38		571
1913: Total Examinations---	4224		1075		680		5979	
Positive Examinations		694		303		107		1104
	5902	1228	2415	636	914	181	9031	2045
Malaria:								
1910: Total Examinations---	1540		935		54		2529	
Positive Examinations		307		309		8		624
1911: Total Examinations---	1631		3361		232		5224	
Positive Examinations		151		1086		29		1266
1912: Total Examinations---	2058		2804		290		5152	
Positive Examinations		318		592		22		932
1913: Total Examinations---	2329		2901		377		5607	
Positive Examinations		256		203		42		501
	7558	1032	10001	2190	953	101	18512	3323
Typhoid:								
1910: Total Examinations---	1484		440		14		1938	
Positive Examinations		439		100		3		542
1911: Total Examinations---	1305		1571		199		3075	
Positive Examinations		278		288		60		626
1912: Total Examinations---	1433		1339		188		2960	
Positive Examinations		207		234		49		490
1913: Total Examinations---	1655		1494		241		3390	
Positive Examinations		301		267		36		604
	5877	1225	4844	889	642	148	11363	2262
Tuberculosis:								
1910: Total Examinations---	1059		425		31		1515	
Positive Examinations		254		126		5		385
1911: Total Examinations---	1134		874		233		2241	
Positive Examinations		292		253		67		612
1912: Total Examinations---	1325		790		311		2426	
Positive Examinations		338		185		85		608
1913: Total Examinations---	1671		897		396		2964	
Positive Examinations		444		264		108		816
	5189	1328	2986	828	971	265	9146	2421

**COMPARATIVE STATEMENT OF THE SIX PRINCIPAL
DISEASES—(Continued).**

	Jacksonville		Tampa		Pensacola		Total	
Gonorrhoea:								
1910: Total Examinations---	420		156		29		605	
Positive Examinations		174		69		12		255
1911: Total Examinations---	432		283		120		835	
Positive Examinations		144		144		52		340
1912: Total Examinations---	399		286		221		906	
Positive Examinations		162		122		97		381
1913: Total Examinations---	437		422		410		1269	
Positive Examinations		183		152		127		462
	1688	663	1147	487	880	288	3615	1438
Hookworm:								
1910: Total Examinations---	6226		999		183		7408	
Positive Examinations		3578		474		90		4142
1911: Total Examinations---	4078		1091		760		5929	
Positive Examinations		2303		409		250		2962
1912: Total Examinations---	3064		691		1239		4994	
Positive Examinations		1533		205		766		2504
1913: Total Examinations---	2343		1105		370		3818	
Positive Examinations		914		239		123		1276
	15711	8328	3886	1327	2552	1229	22149	10884

TABULATION OF PATRONAGE.

The following is a list of towns which have submitted specimens to the Central Laboratory for examination, and the total number for each town for the year 1913:

<i>Towns</i>	<i>No. Submitted</i>	<i>Towns</i>	<i>No. Submitted</i>
Alachua	29	Citra	5
Altha	11	Clarksville	6
Alton	8	Clearwater	13
Alva	1	Clermont	2
Apalachicola	80	Cocoa	34
Apopka	20	Coleman	13
Arcadia	98	Cottdendale	2
Archer	40	Crawfordsville	1
Atlantic Beach	4	Crescent City	86
Aucilla	1	Crystal River	9
Aycock	1	Dade City	17
Baldwin	3	Daytona	144
Bartow	111	Deerfield	1
Bassinger	5	DeFuniak Springs	96
Bellaire	1	DeLand	41
Bellevue	5	Delray	99
Blichton	7	Dinsmore	4
Blountstown	2	Dowling Park	14
Boca Grande	4	Duncan	1
Bonifay	8	Dunedin	1
Bowling Green	26	Dunnellon	18
Boynton	21	EauGallie	3
Bradentown	77	Emerelda	9
Bradley Junction	9	Emporia	6
Branford	5	Enterprise	2
Brooksville	33	Eureka	1
Bronson	34	Eustis	17
Brooker	9	Fairfield	1
Bunnell	13	Favoretta	1
Bushnell	31	Fellsmere	12
Calloosa	1	Fernandina	82
Campville	8	Floral City	3
Camp Walton	1	Freeport	7
Captiva	2	Frostproof	1
Carrabelle	11	Fruitland	3
Cedar Keys	27	Fort Green	2
Center Hill	6	Fort Lauderdale	3
Chattahoochee	3	Fort McCoy	3
Chicora	5	Fort Meade	23
Chipley	8	Fort Myers	12
Christina	10	Fort Ogden	2

STATE BOARD OF HEALTH OF FLORIDA

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<i>Towns</i>	<i>No. Submitted</i>	<i>Towns</i>	<i>No. Submitted</i>
Fort Pierce	66	Levon	1
Fort White	3	Limestone	2
Gainesville	462	Live Oak	146
Gaiter	4	Lulu	19
Georgiana	2	Lloyd	5
Glendale	1	Loughman	8
Grandin	3	Madison	6
Grand Crossing	1	Maitland	4
Grand Ridge	2	Malone	2
Green Cove Springs	77	Manatee	15
Greensboro	39	Mandarin	27
Gretna	13	Manville	1
Greenville	19	Marianna	126
Greenwood	3	Mayo	6
Groveland	3	Mayport	6
Haines City	2	Maccleddy	3
Hallandale	9	McIntosh	9
Hampton	18	Melbourne	12
Haskell	3	Melrose	4
Havanna	3	Meredith	1
Hawthorne	20	Miami	51
Hawks Park	4	Micanopy	61
Hernando	2	Miccosukee	2
High Springs	2	Monticello	15
Hilliard	5	Morrison	7
Hinson	1	Mulberry	26
Holder	11	Murphy	1
Holmestead	1	Myrtle	4
Immokalee	1	Narrows	1
Interlachen	2	Newberry	18
Inverness	19	New Smyrna	63
Jacksonville	7886	Oakland	8
Jasper	10	O'Brien	8
Jennings	3	Ocala	200
Jupiter	1	Okahumpka	2
Kathleen	11	Okeechobee	18
Key West	55	Oklawaha	17
Kissimmee	49	Ona	11
Kuhlman	2	Ozona	6
Lady Lake	2	Orlando	555
Lake Butler	103	Orange Lake	3
Lake City	31	Otter Creek	31
Lake Como	1	Olustee	2
Lake Worth	10	Oviedo	14
Lakeland	43	Oxford	4
Largo	31	Palatka	46
Lawtey	2	Palmetto	31
Leesburg	55	Panama City	2
Lemon City	9	Parish	1

<i>Towns</i>	<i>No. Submitted</i>	<i>Towns</i>	<i>No. Submitted</i>
Pensacola	5	Sumatra	1
Perry	9	Summerfield	3
Pierce	1	St. Andrews	3
Pierson	5	St. Augustine	117
Pine Mount	4	St. Petersburg	66
Plant City	115	Tallahassee	863
Ponce DeLeon	3	Tampa	7
Port Inglis	7	Tarpon Springs	1
Port Orange	16	Tiger Bay	4
Port St. Joe	1	Titusville	159
Punta Gorda	5	Trenton	6
Quincy	60	Trilby	1
Raiford	10	Umatilla	14
River Junction	3	Viking	1
Rodman	2	Wabasso	1
Romeo	1	Wauchula	75
Ruskin	17	Webster	14
San Antonio	21	Welaka	9
Sanford	167	Wellborn	14
Sarasota	67	West Palm Beach	55
Sea Breeze	4	Wewahitchka	1
Sebring	2	White Springs	19
Sebastian	3	Wilcox	1
Seville	2	Wildwood	36
Sharpes	6	Williston	55
Shiloh	3	Winter Haven	16
Sneads	3	Worthington	14
South Jacksonville	27	Youngstown	2
Starke	68		

REPORT OF DR. G. H. SIMON

BACTERIOLOGIST, TAMPA LABORATORY.

Tampa, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—In submitting my annual report for the Tampa Laboratory, I have little to say regarding the work done during the year just past. The tabulated report submitted clearly sets forth what was accomplished during the year of 1913.

There were examined during the past year eight thousand, seven hundred and thirty-five specimens, fifteen hundred and fifty more than during the year of 1912. This large number of examinations frequently taxed the capacity of the laboratory diagnosticians to the utmost, especially when it is remembered that in work of this kind the preparation of large quantities and varieties of media, stains, etc., is required. However, the authorization by the State Board of Health of the appointment of a Sanitary Patrolman who was to devote his spare time to laboratory duties, has been of great benefit. Mr. Charles De Armas, who has been appointed to that position, has shown considerable ability in making examinations for intestinal parasites, preparation of media, stains, etc., and has rendered valuable assistance in the laboratory since his appointment, six months ago.

One striking feature of the report submitted is the large percentage of specimens for examination that were received from Tampa. Of the eight thousand, seven hundred and thirty-five examined, seven thousand, nine hundred and ten, or ninety per cent. came from Tampa.

The physicians of this community fully appreciate the importance of laboratory diagnosis, and avail themselves of the advantages as offered them by the local laboratory of the State Board of Health.

Each member of the laboratory force, I believe, has endeavored during the past year to render the best of service, endeavoring thereby to make this institution a credit to the State of Florida. I desire at this time to make certain recommendations for the coming year, and to make certain suggestions that I believe will aid in keeping up the efficiency of this institution.

First. The duties of the stenographer have, during the past year, been greatly increased, due not only to the increased amount of work that has occurred in the laboratory, but also on account of the additional duties imposed upon Dr. C. W. Bartlett, recently appointed Assistant to the State Health Officer for this part of Florida, whose stenographic and clerical work is also done by the laboratory stenographer. In view of the above facts, I would respectfully recommend that the salary of the stenographer, Miss Valdespino, be increased from \$50.00 to \$65.00 per month.

Second. We find it necessary to keep on hand larger quantities and varieties of media than in the past, and have found that our refrigerator is not large enough to meet our present demands. I would, therefore, recommend that authority be given to dispose of the refrigerator on hand at present, and that one large enough for our present needs be obtained.

Third. The gas heater used for heating water, for cleansing glassware, etc., which was installed almost four years ago, when the building was erected, is no longer in condition to use, and the Tampa Gas Company has advised us that it would be impossible to place the same in satisfactory condition.

I would, therefore, recommend that a suitable heater be provided at an early date, as it is well nigh impossible to get along without one.

Fourth. Last, but by no means least, as custodian of the building, I wish to call attention to the general condition of the laboratory building. It will be necessary in the near future to paint the walls, ceilings and woodwork of the interior of the building, as well as the doors, door and window frames, and cornices on the exterior of the building, to save the structure from deterioration, and to improve its general appearance.

Respectfully submitted,

G. H. SIMON, M. D.;

Bacteriologist in Charge of Tampa Laboratory.

**STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA
LABORATORY DURING 1913.**

REPORT OF TAMPA LABORATORY.—(Continued).

Material Examined	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water (for sewage con- tamination:														
Positive -----									1			1	2	
Negative -----									7	2			9	11
Blood Counts:														
Diff. -----	3	1	1	1			4		3	4	1	1	19	
Plain -----	7	2	5	3		3	2		3	2	3	2	32	51
Leprosy:														
Positive -----				1									1	
Negative -----	2	3											5	6
Ophthalmia:														
Positive -----			1			1	2						4	
Negative -----	1		1		2		2	2	6	6	6		26	30
Urine -----	1			6	2		5	1	1	1			17	17
Cultures from Pus Speci- mens -----	1			3	6	4	7	6	2	11	5	2	47	47
Diazo Reaction:														
Positive -----	1			1	1	1	2	2	1		1		10	
Negative -----						2	1	1		2			6	16
Bacillus Pestis:														
Negative -----	1												1	1
Menningococcus:														
Doubtful -----	1												1	
Negative -----				2			1						3	4
Tetanus:														
Negative -----				1									1	1
Spirocheta Pallida:														
Negative -----					1						1		2	2
Filaria:														
Negative -----						1		1		1			3	3
Paratyphoid:														
Negative -----						1							1	1
Vincent's Angina:														
Negative -----										1			1	1
Taenia Echinococcus:														
Positive -----											1	0	1	1
Total by months -----	303	688	686	680	656	607	731	640	832	832	780	700		8735

TABLE OF SPECIMENS EXAMINED SHOWING NUMBER RECEIVED FROM VARIOUS
TOWNS OF THE STATE, DURING 1913. LABORATORY STATE
BOARD OF HEALTH, TAMPA, FLA.

Tampa -----	7910	Brought forward -----	8702
Lakeland -----	177	Dunnellon -----	2
Plant City -----	166	Belleair -----	2
St. Petersburg -----	64	Valrico -----	2
Clearwater -----	61	Kissimmee -----	2
Fort Myers -----	47	Zephyrhills -----	2
Palmetto -----	40	Tarpon Springs -----	2
Bartow -----	34	Hudson -----	2
Bradentown -----	29	Punta Gorda -----	2
Wauchula -----	29	Leesburg -----	2
Largo -----	21	Titusville -----	1
Arcadia -----	20	Mulberry -----	1
Sarasota -----	20	Palatka -----	1
Manatee -----	14	Lake Wales -----	1
Dade City -----	11	Fort Dade -----	1
Floral City -----	10	Pinellas Park -----	1
Brooksville -----	8	Fort Ogden -----	1
Winter Haven -----	6	Wimauma -----	1
Ruskin -----	6	Archer -----	1
Fort Meade -----	5	Jacksonville -----	1
Kathleen -----	5	Centralia -----	1
Boca Grande -----	5	Parrish -----	1
Umatilla -----	4	Sydney -----	1
Brewster -----	4	Auburndale -----	1
Bowling Green -----	3	Pass-a-grille -----	1
Safety Harbor -----	3		
Carried forward -----	8702	Total -----	8735

REPORT OF DR. F. A. BRINK

BACTERIOLOGIST PENSACOLA LABORATORY

Pensacola, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR: I have the pleasure of handing you a report of work done in the Pensacola laboratory during the year just closed.

The first thing to be noted is the steady increase of work being sent to this laboratory. Last year there were examined 3,852 specimens, an increase of 963 over 1912.

A large portion of the work was examination of diphtheria specimens, and while a great many were negative, there were a few persons who had the disease and carried the disease germs in their throats for long periods after they were apparently well. It is in such instances that the laboratory seems to be of singular usefulness, and the promptness with which the various small outbreaks were gotten under control indicates efficiency on the part of those doing the field work.

The city of Pensacola, it seems to the writer, has been singularly free from acute infectious diseases such as come to the notice of a laboratory worker. There were a few cases of diphtheria, a few of typhoid and a few of malaria, but at no time could it be said that any of these diseases was prevalent.

The number of hookworm examinations fell off very materially, obviously because payment for treatment was withheld by the Board.

Tuberculosis specimens have increased in number about in proportion to the increase in the total number of specimens.

Examination of rats for B. Pestis was left off in June, there seemed to be no urgent need to continue it and the manner of obtaining specimens did not provide them from along the water front. It is of interest that out of about 1,600 rats brought to the lab-

oratory there were no less than fourteen that were infected with rat leprosy, part of these were examined in 1912 and part in 1913.

Early last year we began doing pathological tissue work at this laboratory and 22 specimens were examined with results as satisfactory as one could expect with the specimens that were sent in. Two were unsatisfactory on account of not being well preserved.

Respectfully yours,

F. A. BRINK,

Bacteriologist.

**PENSACOLA LABORATORY,
REPORT OF SPECIMENS EXAMINED.**

1913

Specimen	January	February	March	April	May	June	July	August	September	October	November	December
Animal Parasites:												
Hookworm:												
Positive	9	10			8	28	13	10	12			
Negative	10	12			20	38	29	30	28			
Amoeba Coli:												
Positive					6	2		1	2			
Negative					6	5		2	2			
Doubtful					1		1					
Lamblia Intest.	1				2							
Ascaris Lumbr.	1	1										
Oxyuris Vermi.								1				
Strongyloides Int.					1	4		2	1			
Tapeworms	1				1	1	3	1	4			
Trichocephalus Dispar.		3			1	4	4		4			
Diphtheria:												
Swabs:												
Positive	13	8		1	2		2	4	24			
Negative	24	17		3	6	3	10	13	91	1		
Doubtful								3	16			
Cultures:												
Positive	20	10		1	2		2	6	32			
Negative	18	17		3	6	3	10	14	152	1		
Doubtful									9			
Gonorrhea:												
Positive	6	6		11	9	8	17	12	10			
Negative	8	26		38	27	28	21	16	20			
Doubtful Unfit				1	1	2	1		1			
Malaria:												
Positive		7		5	2	3	5	3	6			
Negative	15	18		20	15	28	46	51	38			
Unsatisfactory								1				
Pathological:												
Malignant				2	1	1		1	2			
Non-malignant	1	1	1	1		1		2	1			
Unsatisfactory									2			
Rabies:												
Dog:												
Positive			1									
Negative						1						
Tuberculosis:												
Positive	9	4	10	13	14	11	13	8	8			
Negative	23	11	36	29	28	26	26	23	25			
Typhoid:												
Positive	4	6	3	3	1	1	11	3	1			
Negative	9	8	10	9	8	13	29	28	27			
Inc.					1	1	1	1	1			

REPORT OF PENSACOLA LABORATORY.—(Continued.)

Specimen	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water Contamination:														
Positive -----						1	1						2	
Negative -----	2	1		2		1		3		1			10	12
Blood Counts:														
Plain -----	1	2	4	9		1	1	1		1	1		21	
Diff. -----		1	1	4		4	4	10	10	1	1		36	57
Urinary Analysis -----	13	8	9	5	4	8	12	9	14	19	11	6	118	118
Rat Plague:														
Negative -----	24	26	33	3	7	9							102	102
Rat Leprosy:														
Positive -----	1	2		1	1	1							6	6
Milk Examinations -----	5	5	11	8	14	38	65	63	64	85	65	62	485	485
Other Misc. Examinations	3	1	2	9	2	1	1	5	5	3	2	2	36	36
Total, 1913 -----	221	211	228	209	208	277	328	337	610	540	298	385		3852
1912 -----	149	126	141	126	208	337	358	442	316	250	222	214		2889
1911 -----	185	157	163	141	151	146	128	147	166	141	132	131		1787

VETERINARY DIVISION

REPORTS OF

**DR. CHARLES F. DAWSON, VETERINARIAN; DR. W. A.
MUNSELL, ASSISTANT VETERINARIAN; DR. J. W. DEMILLY,
ASSISTANT VETERINARIAN.**

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR: I have the honor to present the Annual Report of the Veterinary Division for the year 1913, which also includes the annual reports of Assistant Veterinarians W. A. Munsell and J. W. DeMilly.

The activities of the Veterinary Division have greatly increased during the year in all lines of work coming under its care. The most important subjects demanding increased attention have been the educational campaign upon tick eradication, hog cholera, and glanders, all of which is reflected in the special reports upon these subjects.

During the year, it was found advisable to increase the personnel of the division by the appointment of another veterinarian, and Dr. W. A. Munsell, of Green Cove Springs, a graduate of the Agricultural College of the University of Florida, and of the Veterinary Department of Cornell University, was selected to fill this important position.

Dr. Munsell's work, in every detail he has been directed to execute, has shown him a thoroughly capable man, and the State at large, and the Board of Health in particular, were fortunate in securing the services of a man so well qualified to perform the various duties of the position.

Dr. J. W. DeMilly, who for two years had filled the position of demonstrator in the administration of hog cholera serum, resigned, in October, to attend a veterinary college in order to better himself for his life's work. He is to be commended for this act, and it is hoped that he will receive that encouragement that is due all aspiring young men.

In submitting this report, I wish to avail myself of the opportunity, here presented, to thank you for the many evidences of good will shown by you to me and toward my department.

Respectfully submitted,

CHARLES F. DAWSON, M. D., D. V. S.,

Veterinarian.

HOG CHOLERA.

What is true of every other State regarding some diseases, is true of Florida also: i. e., that hog cholera is our most important swine disease. The hog is the farmer's meat supply to a very large extent. He is the most prolific farm animal, matures earliest, is easy to raise, forages for himself, and produces more weight for the size of his skeleton than any other animal. Every part of the hog, except his grunt, is available in some way for man's use. The hog is receiving as much attention today from breeders as any other animal. He is being bred along almost all conceivable lines to produce this and that excellence. So it may be said the hog is the most important food-producing animal on the farm. This being the case, the diseases to which he is heir assume a corresponding importance. The greatest of these is, as everybody knows, hog cholera. The number of hogs lost annually in the United States from this disease is almost incalculable—the loss can only be estimated. Of this loss, Florida has sustained her quota, since the advent of the disease in this State, in 1840.

Florida may have a million hogs. It is entirely possible that one-tenth of these die of cholera. The average price of our common piney-woods "rooter" is from three to five dollars. Hence, with a ten per cent. loss, Florida may lose \$300,000.00 to \$500,000.00 worth of hogs annually. In other States where higher-bred hogs are worth more, and where it costs more to produce them, the losses run into the millions of dollars. As a matter of fact, it is highly probable that the loss to farmers in hogs exceeds that in all other farm animals combined in the whole United States. How important it is, then, that scientists should strive to find some cheap and effective method of combatting the disease which causes these untold losses. It is of the utmost importance that a method for entirely eradicating the disease be put into operation. It can be done. There is absolutely no excuse for the existence of hog cholera, because we now have a method of *double-vaccination*, which renders the hog absolutely immune to the disease. It is only a question of money and men. The use of a single serum treatment is only a make-shift as judged from a scientific standpoint; it does not accomplish anything at all in the eradication of the disease, merely saving some of the hogs from death from hog cholera. The dou-

ble vaccination, i. e., the simultaneous injection of the serum and of the *virus* of hog cholera, will absolutely prevent the treated animal from contracting the disease, and if every animal were so treated, it is easy to see that hog cholera would immediately cease to exist on the face of the earth. The method has been worked out; it has been proven by thousands of experiments and no more experimenting is needed excepting the cheapening of the method of serum production, and the identification of the germ of hog cholera. Until this germ has been identified we shall be compelled to use the serum and virus for protection against the disease. The practical man and hog owner can use this method while the scientist is trying to discover the cause of the disease. This done, we may expect a new and cheaper method of protecting the hog from cholera.

In my annual report for 1912, I reported the results of an experiment made under your direction and authority, in which it was fairly well shown that buzzards *do not* carry the germ of hog cholera in their droppings; and commented upon the fact that our experiments did not prove that the hog cholera virus is not carried in the vomit of buzzards and upon their feet and feathers. I promised to make experiments to determine these points, but as the facilities for such work, projected at that time, have not, for various reasons, been provided, these promises have not been carried out. Work of this kind can not be left to the care of persons who can have no particular interest in it. It must be done under the eye of the experimenter who must see his experimental animals several times a day; and this means the work must be done at the laboratory, and not at some distant point.

FREE SERUM DISTRIBUTION.

During the past year, serum has, as required by law, been distributed free of charge, even transportation costs being prepaid, to all who properly applied for it. While the law requires the Board to send the serum free of all costs, it very properly allows the Board to make such rules governing its distribution as it deems necessary. These rules were adopted for the purpose of ultimately ascertaining the results of the use of the serum; because if the serum were doing no good, it is evident that the Board should recommend abandoning its use, and stop a considerable drain upon the financial

resources of the State. In order to determine this point, the following circular letter of inquiry was sent to every agent and owner who had received serum, about five hundred in number:

Jacksonville, Fla., November 19, 1913.

To All Persons who Have Used Hog Cholera Serum Furnished by the State Board of Health in 1913:

Dear Sir:—

Your name appears on the records of this office as one who has been furnished free hog cholera serum.

It is desirable to know, in a general way, whether the serum has been a valuable means for checking the spread of hog cholera and whether the State is warranted in continuing its free distribution.

You are, therefore, respectfully requested to reply to the following questions, giving your answer as correctly and briefly as possible. Stamped envelope is enclosed for reply.

Yours respectfully,

JOSEPH Y. PORTER, M. D.,

State Health Officer.

QUESTIONS.

1. State the number of hogs you treated -----
2. What was their estimated value? -----
3. How many were sick when treated? -----
4. How many were well when treated? -----
5. How many had died before treatment was applied? -----
6. How many died after treatment? -----
7. Were there any bad effects from treatment, such as swellings? -----
8. How long had you kept serum on hand which gave bad results? -----
9. Do you think any hogs died as a result of the treatment? -----
10. What is the general opinion of the owners as to the value of the treatment? -----
11. What is your opinion as to the value of the treatment? -----
12. Are you an Agent or simply the owner of the hogs you are giving answers about? -----
13. If an Agent, have you provided yourself with a syringe and do you wish to retain your agency? Give your postoffice and express office address -----
14. What is your occupation? -----

It had been anticipated, on account of the serum being put into the hands of persons not experienced in such matters, that a large number of the reports would be unfavorable. To our surprise, however, at least 95 per cent of the answers were favorable, some

owners going so far as to write long testimonials as to its efficiency when these were not asked for or desired.

The following memorial is of interest at this point:

MEMORIAL.

United States Live Stock
Sanitary Association.

Chicago, August 20, 1913.

To the Members of the American Veterinary Medical Association, in Convention Assembled.

Gentlemen:—

As the result of much study and observation in connection with the slaughter of large numbers of hogs at packing houses under United States Government Inspection we deem the following observations of timely importance to the members of your Association and of even greater interest to the Farmers and Stockmen whom you serve.

We recognize the Niles-Dorset Serum for the treatment of Hog Cholera as the most valuable agent now employed for this purpose. We recognize that in the hands of competent veterinarians this Serum may be safely administered and prove of great value. We also believe that in the hands of the average Farmer and unskilled operator, the use of this Serum may cause serious damage to portions of hog carcasses. We believe that improper Serum, the use of dirty syringes accompanied by general unsanitary conditions after treatment will result in serious damage.

As the proper area for inoculation is still an open question, we wish to suggest that some place other than the ham be properly designated as suitable for the purpose. There is a probability of ham inoculation abscesses not discoverable until the ham is sliced for use.

So serious has the situation become, that one packing firm has undertaken a series of comparative experiments, in which groups of live hogs are being vaccinated in the Neck, Shoulder, Flank and Ham. These groups will be kept separate, slaughtered separately and injury to the carcasses carefully compared by United States Government Inspectors.

We wish to bring this matter strongly before the attention of the American Veterinary Medical Association, with a recommendation that the matter be investigated and, if possible, some action taken to check this preventable damage.

In our opinion Serum should be used only by competent Veterinarians. The use of Serum by farmers and incompetent laymen should be discouraged as far as possible.

Respectfully submitted,

J. I. FERGUSON,
Secretary and Treasurer.

Serum has cost Florida more than \$10,000.00 this year, as against about \$15,000.00 in 1912. The difference in the amounts distributed was caused largely by our inability to supply the demand at a time when it was greatest all over the United States, and to our having adopted more careful methods of distribution. It was found advisable to discontinue the practice of allowing per-

sons to accumulate serum on hand for so-called emergencies. Many hogs were killed by their owners using old serum which had become putrid, and it became necessary, in order to protect the owner against himself, and often against his will, to send him enough only to treat such hogs as he had at hand; and this necessitated the strict adherence to the rule of requiring that all serum must be applied for on our official application blank.

As the Board could not even attempt to keep enough veterinarians in the field to respond to all calls for help in treatment of hogs, the plan of appointing local agents who had been instructed was adopted. There are now about one hundred and seventy-five of these local agents, scattered in the various counties, and when an owner applies for serum, he is directed to employ one of these agents to do the work for him, if he is not equipped to do it for himself. A list of these agents will be found at the end of this article.

Even with this unusual liberality on the part of the State, there are some who are disposed to grumble. While it does seem hard for a poor farmer to lose his hogs from a cause against which he is powerless, yet I believe that the general rule that the most deserving and those least able to stand the loss, get the least help, because they, as a general thing, take less trouble to keep up with the advances of the times. Many of the owners receiving large amounts of serum, which has cost the State twenty dollars a quart, were amply able to pay for it. In some instances, they ordered more than they needed, and when their reports showed they had not used it all, they were in many instances directed to destroy it, as it had aged and would have been dangerous for others' hogs. There are now, on my desk, three bottles of such serum, which cost the State \$17.50.

If the State Board of Health were, by this comparatively large expenditure, eradicating hog cholera from Florida, we should probably view it as money well and wisely spent. *It is a State's duty to PREVENT diseases; but it is a debatable question as to its being a State's duty to CURE diseases.* For all the money expended on hog cholera, so far, the disease has not lessened one iota either in Florida or the United States. Many hogs have undoubtedly been saved to the owners, but the disease is as wide-spread as ever, and

will remain so, and even increase, unless the principle of double treatment is resorted to in *every pig that is born*.

It will do little good, upon the whole, to double-vaccinate a drove here and there. In fact, it will make matters worse; because the hogs of the man who does not double-vaccinate or treat with the single serum method, will catch the disease from his neighbor's hogs that have been double-vaccinated, as it is now believed that the double-vaccinated hog, while not visibly sick himself, is passing the introduced hog-cholera germ from his body and infecting other untreated hogs. He is a "carrier" of disease. As a matter of fact, this may explain the apparent increase in hog cholera in the middle west last year, where double-vaccination is being practiced. It is fine for the fellow who uses the method, but very dangerous for his neighbor who has done nothing to ward off cholera. It, therefore, seems advisable to quarantine such vaccinated hogs for 30 days as a matter of protection for the other fellow.

In conclusion, Florida and Illinois are the only States that are furnishing hog-cholera serum free. The serum costs from \$15.00 to \$20.00 a quart, according to the prices of different makers. Many States produce their own serum and sell it to its citizens at cost price, which is about \$15.00 a quart. The following financial statement shows it cost Michigan about \$13.33 per quart to make the serum:

FINANCIAL REPORT ON HOG CHOLERA SERUM MANUFACTURE,
JULY 1ST, 1912-JULY 1ST, 1913.

Feed, concentrated -----	\$ 685.58
Hay, straw and roughage-----	148.43
Swine -----	4,930.54
Labor -----	3,500.00
Travel -----	5.33
Apparatus and sundry items-----	61.59
	<hr/>
	\$9,331.47

SERUM.

Total No. cc on hand good, July 1st, 1912 -----	216,070
Total No. cc. on hand not tested, July 1st, 1912 -----	47,745
Total No. cc. on hand experimental -----	32,860
Total No. cc. drawn and mixed during year -----	362,380
Total No. cc. not mixed, on hand July 1st, 1913 -----	12,005
	<hr/>
Total No. cc. -----	671,060

It would cost Florida more than this to make her own serum, as the Michigan figures do not include charges for buildings and rent of necessary land.

In order to lessen correspondence, and answer the many questions asked by correspondents, the following circular of information entitled "Facts About Hog Cholera Serum and Its Distribution," was printed for distribution.

FACTS ABOUT HOG CHOLERA SERUM AND ITS DISTRIBUTION.

READ CAREFULLY.

The serum does not cause hog cholera.

It does not cure hog cholera. It may exert some slight curative effect, but must be used in doses that are so large as to make it unprofitable to use. The State Board of Health will not supply serum for such use, nor does it supply ~~virus~~ at present.

To get the best results, serum must be used as soon as cholera appears in the drove.

If only small pigs and shoats are sick it is not cholera, but lung worm disease, and the serum will do no good.

If the place the serum is injected at is not cleaned and washed with a disinfectant, 5 per cent carbolic acid, *abscess may occur*. Make the injections under the skin, and not into the meat as advised by most manufacturers of serum. In the case of pregnant sows or large and unruly animals, make the injections behind the ear, snubbing the animal against a post, by means of a rope looped around the chest. The syringe should be loosened up in its parts after a day's work, thoroughly washed out, and boiled; otherwise abscesses will occur in the next hogs treated.

Serum does not hurt the meat. The stain left on the meat will pass away in time. Unlike in other diseases, it is not necessary to separate the sick from the well, but it is highly advisable to bury or burn all the animals that die, thus preventing, in a measure, the disease being carried to your neighbors by carrion-eating birds. When properly used, the serum protects the hog for about a year, the life of the pork hog. Breeders must be treated every year. The serum does not cause sick hogs to die earlier. Handling is the cause. It is a waste of serum, the owner's time and the State's money to treat sick hogs. Serum should not be applied for until you have arranged with your local agent who has a syringe to do the work for you. These syringes are sold by the Bettes' Pharmacy, Jacksonville, for \$4.50, ounce size. The owner pays the agent for his work. Owners who are familiar with the work and who have their own syringe, may obtain serum. *The serum can only be obtained by applying for same on the application blank*, and agents should keep a supply of these on hand. It does not hurry matters to telegraph for serum. Serum ordered and not used should be returned immediately, if the bottle has remained unopened, at the sender's expense. When possible the serum should be kept on ice. In other cases it may be kept in a hole in the ground, in a shady place. Make your report of the use of the serum a month after you have used it, on the blank which you will find in the package of serum sent you. Please be careful to

fill out the blanks and answer all the questions as far as you can, on the application blank, being sure to give postoffice and express office addresses, and the name of your local agent. *Application blank is also an agreement that you report on use of all serum sent you.*

The Hog Cholera Agents of the State Board of Health are as follows. Consult your County Agent when you wish to have your hogs treated:

ALACHUA COUNTY.*Alachua—*

C. S. Douglass.
J. A. Frederick.
M. F. Studstill.

Archer—

W. J. Jones.

Campville—

Dr. G. W. Sherhouse.

Gainesville—

G. W. Harrison.

Hawthorn—

J. F. Carlton.
G. D. Moore.
R. Price.

Micanopy—

R. E. Arnow.
Earl D. Matthews.
D. R. Zetrouer.

Newberry—

J. B. Smith.

Trenton—

Geo. Asbell.
S. K. DuPuis.

Windsor—

G. A. Byles.

BAKER COUNTY.*Macclenny—*

R. C. Clews.
W. E. Schoch.

Taylor—

R. R. Rhoden.
W. B. Taylor.

BAY COUNTY.*Panama City—*

W. R. McDaniels.

BRADFORD COUNTY.*Dukes—*

S. M. Dukes.

Hampton—

L. J. Wynn.

Lawtey—

Dr. G. W. Brown.

Starke—

D. W. Alvarez.
Theo. Tison.

CALHOUN COUNTY.*Altha—*

C. A. Langford.

Blountstown—

J. L. Griffin.

Henderson—

T. Fields.

CITRUS COUNTY.*Citronelle—*

W. F. Sutton.

Crystal River—

J. T. Rawls.

Hernando—

Dr. A. D. Puterbaugh.

CLAY COUNTY.*Belmore—*

E. E. Geiger.

Green Cove Springs—

J. L. Batten.
G. R. Hall.

Middleburg—

W. W. Hamilton.
M. M. West.

Waller—

McL. Conoly.

COLUMBIA COUNTY.

J. L. Lichenstine.

Lake City—

P. G. Brown.
B. D. Jordan.
S. W. Lamb.
C. C. Parker.

DeSoto County.*Bowling Green—*

L. R. Sealey.

Bridges—

M. H. Harrison.

Fort Green—

Dr. C. A. Gavin.

Limestone—

A. Albritton.

Nocatee—

Dr. R. F. Carlton.

Punta Gorda—

Jas. S. Goft.

DUVAL COUNTY.*Baldwin—*

J. M. Saucer.
Lee Thomas.

Bayard—

H. L. Manners.

Broward—

J. S. Higginbotham.

Mandarin—

Dr. Geo. D. Kennedy.

ESCAMBIA COUNTY.*Atmore, Ala.—*

J. L. Godwin.

Pensacola—

W. M. Malone,
R. 1, Box 66.

J. C. OuBre,

214 S Palafox.

Pine Barren—

W. H. Johnston.

GADSDEN COUNTY.*Chattahoochee—*

J. L. Lindsay, Jr

Greensboro—

J. L. Shepard.

Gretna—

D. D. Edwards.

Havana—

M. E. McCorquadale.

Juniper—

W. D. Richards.

Quincy—

J. G. Ball.

HAMILTON COUNTY.

Jasper—

Dr J. H. Corbett.

Lake Park, Ga.—

John Colson.

White Springs—

W. M. Bennett.

HERNANDO COUNTY.

*Brooksville—**Croom—*

J. T. Downing, Trilby.

Istachatta—

Dr. McKnight.

HILLSBOROUGH COUNTY.

Knights—

A. E. Carlton.

Plant City—

D. J. Allen.

E. G. Bugg.

W. L. Holloway.

Tampa—

Dr. F. W. Porter.

Thonotosassa—

R. W. Weatherington.

HOLMES COUNTY.

Bonifay—

H. D. Brock.

Noma—

Dr. R. B. Warren.

Westville—

Dr. D. G. Milton.

JACKSON COUNTY.

Campbellton—

J. C. Clark.

Dr. W. A. Parrish.

Cottondale—

W. H. Harrison.

Grand Ridge—

W. J. Bradley.

Inwood—

W. W. Wester.

Jacob—

Dr. M. W. Eldridge.

Sneads—

A. J. Brunson.

Alfred Griffin.

L. L. Spooner.

G. R. Spooner.

Drs. Wilson &

Hudgens.

JEFFERSON COUNTY.

Aucille—

Dr. W. N. McLeod.

Lamont—

Dr. W. H. Walker.

Lloyd—

S. B. Coxetter.

Lovett—

John E. Morris.

Monticello—

G. C. McCali.

LAFAYETTE COUNTY.

Day—

A. J. Fowler.

Mallory—

T. A. Fletcher.

Steinhatchee—

J. D. Johnson.

LAKE COUNTY.

Lady Lake—

J. M. Walton.

Tavares—

W. J. Rogers.

LEE COUNTY.

Fort Myers—

W. H. Towles.

LEON COUNTY.

Bloxham—

L. W. Stoutamire.

Chaires—

W. T. Graham.

Tallahassee—

T. M. Atkinson.

LEVY COUNTY.

Bronson—

G. A. Boyd.

S. W. Faircloth.

Echo—

T. C. Hogan.

Montbrook—

J. B. George.

Morrison—

Lawton Priest.

Newton—

Geo. Asbell, Trenton.

New Town—

S. S. Smith.

*Rosewood—*Mr. Coarsey, Postmas-
ter.*Williston—*

W. E. Brown.

LIBERTY COUNTY.

Bristol—

W. S. Summers.

Dr. E. K. Thagard.

Sumatra—

R. D. Fryer.

MADISON COUNTY.

Ebb—

A. B. Sever.

MARION COUNTY.

Bay Lake—

E. F. Wilson.

Burbank—

J. B. Haney.

Conners—

R. F. Rogers.

LeRoy—

J. D. Williams.

McIntosh—

S. H. Gaitskill.

Morrison—

J. B. George.

Ocala—

Dr. J. H. Dunn.

Romeo—

J. E. Walker.

Sparr—

W. Luffman.

ORANGE COUNTY.

Orlando—

Dr. B. D. Wienenga.

OSCEOLA COUNTY.

Kissimmee—

J. E. Lupper.

J. M. Lee.

E. L. D. Overstreet.

POLK COUNTY.

Bartow—

A. O. Graddy.

Dr. H. P. Newman.

Bradley Junction—

J. C. English.

W. H. Surrency.

Fort Meade—

A. H. DeVane.

Lakeland—

Dr. D. P. Carter.

James H. Jones.

PUTNAM COUNTY.

Keuka—

C. H. Price.

Palatka—

J. P. Neubeck.

Sisco—

J. E. Wells.

SANTA ROSA COUNTY.

Jay—

C. V. Mixon.

Milton—

D. W. T. Edger.

Dr. H. Mason Smith.

J. M. Nobles.

H. J. Stoners.

J. W. Urquahart.

ST. JOHNS COUNTY.

Baker—

J. R. Miller.

*Dewey—*H. L. Manners,
Bayard.*Dupont—*

Dr. D. B. Brown.

*Durbin—*H. L. Manners,
Bayard.*Elkton—*

Dr. F. S. Whitney.

Hastings—

Dr. A. Dolan.

Orangedale—

W. McL. Jenkins.

St. Augustine—

Dr. B. A. Leak.

Switzerland—

H. L. Manners, Bayard.

ST. LUCIE COUNTY.

Sebastian—

W. F. Baughman.

SUMTER COUNTY.

Coleman—

B. C. Bridges.

Oxford—

T. E. O'Del.

Webster—

Dr. S. C. Wood.

SUWANEE COUNTY.

Branford—

M. A. Best.

C. P. Odom.

Dowling Park—

Jno. P. Howland, Jr.

Live Oak—

Grover C. Hodge.

Horace Hurst.

A. C. Johnson.

Dr. W. C. White.

Newburn—

Jno. P. Howland, Jr.

O'Brien—

Dr. J. H. Reynolds.

Wellborn—

A. S. Hogans.

Dr. McClellan.

Wilmarth—

C. W. Cheshire.

TAYLOR COUNTY.

Perry—

Barney O'Quinn.

VOLUSIA COUNTY.

*Bunnell—**Favorita—**Harwood—**Hammond—**Ormond—**Seville—**Volusia—*Dr. D. B. Brown,
Dupont.*Glenwood—*

W. A. Bredow.

WAKULLA COUNTY.

Sopchoppy—

Chas. K. Allen.

Wakulla—

G. S. Neesmith.

WALTON COUNTY.

DeFuniak Springs—

Prof. H. J. Rogers.

Floral, Ala.—

P. S. McClung.

Alex. McRae.

Laurel Hill—

J. B. Steel.

WASHINGTON COUNTY.

Chipley—

G. A. Danley.

Dr. J. G. Phillips.

Duncan—

R. E. Golden.

COUNTY FARM DEMONSTRATION AGENTS.

The following county farm demonstration agents have been appointed agents for the administration of anti-hog-cholera serum, and are also interested in tick-eradication.

Baker County—E. W. Turner, Agent, Macclenny.
Bradford County—O. L. Mizell, Agent, Dukes.
Columbia County—J. D. Brown, Agent, Lake City.
Escambia County—S. W. Hiatt, Agent, Pensacola.
Gadsden County—M. C. Gardner, Agent, Greensboro.
Hillsboro County—R. T. Kelley, Agent, Plant City.
Holmes County—C. A. Fulford, Agent, Bonifay.
Jackson County—G. W. Belser, Agent, Cottondale.
LaFayette County—D. C. Geiger, Agent, Mayo.
Levy County—W. E. Brown, Agent, Williston.
Leon County—Frank Robinson, (col.), Agent, Tallahassee.
Liberty County—A. W. Turner, Agent, Bristol.
Madison County—D. R. McQuarrie, Agent, Madison.
Marion County—S. J. McCully, Agent, Berlin.
Orange County—C. H. Baker, Agent, Zellwood.
Pasco County—I. E. Soar, Agent, Dade City.
Polk County—A. A. Lewis, Agent, Kathleen.
Santa Rosa County—C. C. Simmons, Agent, Botts.
Suwannee County—T. Z. Atkeson, Agent, Live Oak.
Walton County—J. C. Smith, Agent, DeFuniak Springs.
Washington County—D. G. McQuaggie, Agent, Chipley.
DeSoto County—Joseph Crews, Agent, Wauchula.

The following statistical table will indicate the activities of the Board in the distribution of hog cholera serum in 1913:

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
ALACHUA													
Serum Distributed (cc)		7000	9500		6250	4000		9000	7500	20250	2250	2000	67750
Serum Administered (cc)		3250	2835	4470	1245	400	1500	1080	4270	3875		1000	24405
Hogs Reported Treated		113	94	181	50	18	75	39	227	140		40	997
Estimated Weight Hogs		8325	6400	10900	3750	1550	4000	2350	1600	5250		2650	57975
Serum Not Reported													43345
Cost of Serum Supplied													\$1084 00
BAKER													
Serum Distributed (cc)						500							500
Serum Administered (cc)							190						190
Hogs Reported Treated							13						13
Estimated Weight Hogs							450						450
Serum Not Reported													310
Cost of Serum Supplied													\$8 00
BAY (No Serum Supplied)													
BRADFORD													
Serum Distributed (cc)					1000	750			6500		500		8750
Serum Administered (cc)		350				500							850
Hogs Reported Treated		15				16							31
Estimated Weight Hogs		1050				1000							2050
Serum Not Reported													7900
Cost of Serum Supplied													\$140 00
BREVARD (No Serum Supplied)													
CALHOUN (No Serum Supplied)													

CITRUS

Serum Distributed (cc)	2000	1000	2750		2500	1500	11250	1500	22500
Serum Administered (cc)	105		290		1350	1000	1815		5150
Hogs Reported Treated	6		17		49	52	82		232
Estimated Weight Hogs									17350
Serum Not Reported	400		850		5950	2800	6300		17550
Cost of Serum Supplied									\$380 00

CLAY

Serum Distributed (cc)				2500		8500	3750	500	15250
Serum Administered (cc)				1000		3000	2345		6495
Hogs Reported Treated				61		97	96		280
Estimated Weight Hogs				2950		8010	5925		17335
Serum Not Reported									8755
Cost of Serum Supplied									\$244 00

COLUMBIA

Serum Distributed (cc)		500	250		3050	2000		1250	7050
Serum Administered (cc)	1625			*2000					4520
Hogs Reported Treated	102			97					240
Estimated Weight Hogs	4150			3950					10240
Serum Not Reported									2530
Cost of Serum Supplied									\$112 80

DADE

Serum Distributed (cc)								1750	1750
Serum Administered (cc)									
Hogs Reported Treated									
Estimated Weight Hogs									
Serum Not Reported									1750
Cost of Serum Supplied									\$28 00

DE SOTO

Serum Distributed (cc)	750		2000		3000	1750	3000	1250	13750
Serum Administered (cc)					785	500		835	5110

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913. --(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Hogs Reported Treated		75						57	40		61	38	271
Estimated Weight Hogs		4060						2600	800		11650	2475	21585
Serum Not Reported													8640
Cost of Serum Supplied													\$220 00
DUVAL													
Serum Distributed (cc)				2000			1000			500	1250	500	5250
Serum Administered (cc)							1200						1200
Hogs Reported Treated							53						53
Estimated Weight Hogs							4050						4050
Serum Not Reported													4050
Cost of Serum Supplied													\$84 00
ESCAMBIA													
Serum Distributed (cc)	3000	4000		5000	4250	750				750	500		18250
Serum Administered (cc)	1035	1875	690	2090	3485	2670						435	12280
Hogs Reported Treated	56	82	13	113	196	129						20	609
Estimated Weight Hogs	4175	5860	500	6900	10000	9100						1460	37995
Serum Not Reported													5970
Cost of Serum Supplied													\$284 00
FRANKLIN													
(No Serum Supplied)													
GADSDEN													
Serum Distributed (cc)			1000		750					500			2250
Serum Administered (cc)					745								745
Hogs Reported Treated					38								38
Estimated Weight Hogs					2550								2550
Serum Not Reported													\$36 00
Cost of Serum Supplied													1505

HAMILTON

Serum Distributed (cc)	2000	1000	1000	1250	5250
Serum Administered (cc)	1900				2080
Hogs Reported Treated	92				98
Estimated Weight Hogs	7130				7480
Serum Not Reported					3220
Cost of Serum Supplied					\$84 00

HERNANDO

Serum Distributed (cc)				2500	2500
Serum Administered (cc)					
Hogs Reported Treated					
Estimated Weight Hogs					
Serum Not Reported					2500
Cost of Serum Supplied					\$40 00

HILLSBOROUGH

Serum Distributed (cc)	3000	7750	750	2500	750	2000	1250	4250	22250
Serum Administered (cc)	75	5000	1080	540		1500	450		8845
Hogs Reported Treated	2	242	58	23		80	15		420
Estimated Weight Hogs	400	19650	3100	1900		7800	1660		34510
Serum Not Reported									13605
Cost of Serum Supplied									\$356 00

HOLMES

Serum Distributed (cc)		2000			2000				4000
Serum Administered (cc)					2000				2000
Hogs Reported Treated					130				130
Estimated Weight Hogs					8950				8950
Serum Not Reported									2000
Cost of Serum Supplied									\$64 00

JACKSON

Serum Distributed (cc)	1000	1000	3500	2500	11000	3000	2500	3750	32000
Serum Administered (cc)	725		1525		3570	2550	2205	4315	19355
Hogs Reported Treated	21		86		166	86	168	129	951

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Estimated Weight Hogs		3250		4800		9800	11500		4110	195	3915	24080	12039
Serum Not Reported													12845
Cost of Serum Supplied													\$512 00
JEFFERSON													
Serum Distributed (cc)	2000			1500			2250						5750
Serum Administered (cc)				*810									810
Hogs Reported Treated				38									38
Estimated Weight Hogs				2600									2600
Serum Not Reported													494
Cost of Serum Supplied													\$92 00
LAFAYETTE													
Serum Distributed (cc)			14000							8750	750	3750	2725
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													27250
Cost of Serum Supplied													\$436 00
LAKE													
Serum Distributed (cc)				500	500								1000
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													1000
Cost of Serum Supplied													\$16 00

LEE
(No Serum Supplied)

LEON

Serum Distributed (cc)	1000	750	1250	1750					4750
Serum Administered		1040	510	2505	1000				**7255
Hogs Reported Treated		51	23	104	37				301
Estimated Weight Hogs		3150	1400	8300	3050				22480
Serum Not Reported									
Cost of Serum Supplied									\$76'00

LEVY

Serum Distributed (cc)									
Serum Administered (cc)	725	500	500	750	4250	8750	11250	12750	4250
Hogs Reported Treated	38				1450	5680	5990	12870	2480
Estimated Weight Hogs	2225				57	260	279	559	100
Serum Not Reported					5350	11300	14750	38820	7950
Cost of Serum Supplied									4800
									45500
									31650
									1419
									89520
									13850
									\$728 00

LIBERTY

Serum Distributed (cc)									
Serum Administered (cc)	*850								850
Hogs Reported Treated	36								36
Estimated Weight Hogs	2500								2500
Serum Not Reported									
Cost of Serum Supplied									

MADISON

Serum Distributed (cc)									
Serum Administered (cc)		500							500
Hogs Reported Treated									
Estimated Weight Hogs									
Serum Not Reported									500
Cost of Serum Supplied									\$8 00

MANATEE

(No Serum Supplied)

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
MARION													
Serum Distributed (cc)	5000		3000	1250	4000	2000		1500	2000	2000	6750	1250	28750
Serum Administered (cc)	2340		3800	1865	930	800	2915	*505	200	2555	420		16330
Hogs Reported Treated	175		176	106	29	69	133	21	10	119	28		868
Estimated Weight Hogs	9690		14200	4900	900	3450	7600	1000	850	6520	560		49670
Serum Not Reported													12420
Cost of Serum Supplied													\$460 00
MONROE													
Serum Distributed (cc)			1250										1250
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													1250
Cost of Serum Supplied													\$20 00
NASSAU													
(No Serum Supplied)													
ORANGE													
Serum Distributed (cc)												750	750
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													750
Cost of Serum Supplied													\$12 00
OSCEOLA													
Serum Distributed (cc)						250							250
Serum Administered (cc)				*250									250
Hogs Reported Treated				5									5
Estimated Weight Hogs				1600									1600

**Serum Not Reported -----
Cost of Serum Supplied**

PALM BEACH
(No Serum Supplied)

PASCO
(No Serum Supplied)

PINELLAS

	2000	2000
Serum Distributed (cc)		
Serum Administered (cc)		
Hogs Reported Treated		
Estimated Weight Hogs		
Serum Not Reported		
Cost of Serum Supplied		\$32 00

POLK

[illegible]

PUTNAM

Serum Distributed (cc)	1000			500	1500
Serum Administered (cc)	1170		*350	500	2020
Hogs Reported Treated	54		15	25	94
Estimated Weight Hogs	4250		1200	1050	6500
Serum Not Reported					
Cost of Serum Supplied					\$24 00

**SANTA ROSA
(No Serum Supplied)**

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
SEMINOLE (No Serum Supplied)													
SAINT JOHN													
Serum Distributed (cc)				4000	2250	750			1750	750	1000		10500
Serum Administered (cc)					100	4120		*110					4330
Hogs Reported Treated					4	163		5					172
Estimated Weight Hogs					250	10050		300					10600
Serum Not Reported													6170
Cost of Serum Supplied													\$168 00
ST. LUCIE (No Serum Supplied)													
SUMTER													
Serum Distributed (cc)							3500	4000	4750	1750	6250	8250	28500
Serum Administered (cc)									700			7950	8650
Hogs Reported Treated									25			329	354
Estimated Weight Hogs									1950			23050	25000
Serum Not Reported													19850
Cost of Serum Supplied													\$456 00
SUWANEE													
Serum Distributed (cc)	4000	3000		2250	5500	21750	15500	4000	4200	7500		750	68450
Serum Administered (cc)	2200	1820	900		800	1170	17100	8380	2195	1650		470	36685
Hogs Reported Treated	82	76	40		17	47	809	279	65	48		11	1473
Estimated Weight Hogs	8200	5520	2100		1100	2850	44700	30650	6200	5500		850	107670
Serum Not Reported													31765
Cost of Serum Supplied													\$1095 20
TAYLOR													
Serum Distributed (cc)										5500			5500

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Cost of Serum Supplied -----													
Serum Supplied State Board of Health													
Veterinarians -----		6000	4000	1000	4000	1500	3000	5000			2500		27000
TOTALS (For 1913)													
Serum Distributed (cc) -----	18000	26000	47000	27500	39500	49500	37250	47750	41750	93750	44750	35250	508000
Serum Administered (cc) -----	13935	13475	22380	8865	9780	14715	31745	21650	17910	30765	12145	14620	211985
Hogs Reported Treated -----	659	535	1007	456	462	689	1464	922	888	1224	552	680	9538
Estimated Weight Hogs (pounds) -----	47955	38760	68675	27650	26050	41550	95150	62300	83850	96650	42285	59365	690240
Serum Not Reported -----													296015
Cost of Serum Supplied -----													\$8120 00

*Serum administered by veterinarians of the State Board of Health.
 **Portion of this amount administered by agents from Gadsden County.

GLANDERS.

Glanders, the most important horse and mule disease, from the standpoint of the sanitarian, has been unusually plentiful the past year, more particularly, in and near Jacksonville.

There have been 63 cases in the State; 52 of these were found in Jacksonville and its suburbs.

While most of the cases could be diagnosed on inspection, it was necessary to apply the mallein test in many outbreaks that the disease might be effectually eradicated. The horses and mules tested with mallein numbered 227.

With the figures and information at hand, at the end of a somewhat strenuous year's work in glanders in Jacksonville, one can not but believe that two, possibly three, dealers doing horse-trading business in Jacksonville and its suburban district have knowingly, or unknowingly—let us hope the latter—imported glandered stock from the large horse markets, where it is always plentiful. There is no other way of accounting for the facts that numerous cases give the history of having been sold by Mr. so and so about a year ago, and that the dealer is known to have shipped a carload from Chicago, or other large market about that time. Of course, no buyer could find a nest of visibly-glandered horses on the open market being offered for sale; but he might, if he looked far enough, find a lot that had been bunched as "reactors to mallein." These, having the disease in a latent form, could easily make the trip to Florida and not show the disease for a year, by which time they would have changed owners many times, possibly; so that it would be next to impossible to fix the responsibility. Such horses would be sold cheap, with or without knowledge on the part of the buyer of what he was getting. Such business is disreputable in the extreme, as it causes no end of trouble and loss to innocent people. If the losses could be confined to those engaged in the deals, we should probably have little to say, as horse dealers usually know how to look after their own interests.

With the adoption of the regulations proposed in another article of this report, requiring the mallein test chart to accompany all shipments of horses, mules and asses, and signed by the veterinary authorities of the State in which the shipments originate, and the strict application of the mallein test in every outbreak that occurs

in the State, there is no reason why the number of cases will not be reduced to a very small number in future years.

The disease has cost the State nearly \$5,000.00 in condemnations this year. This amount is less than the disease has cost the people who owned the animals when they were condemned, because every animal has cost the owner more than \$75.00, the maximum amount allowed by law for an animal condemned for glanders.

THE NEW TEST FOR GLANDERS.

A new test that is practical and reliable has lately been advocated and put into practice. The writer has had opportunities of testing the method on horses that were evidently glandered and hereby recommends it. It is known as the *Ophthalmic* or *Conjunctival* test, and has the great advantage that it is simple, easy to apply, and no temperatures need be taken. These are great advantages in working amongst troublesome and unruly animals.

The following is the report of the Special Committee for the Detection of Glanders, made to the American Veterinary Medical Association at New York, September, 1913:

In applying test, first examine the eye to be used to see that it is sound and has a perfectly normal conjunctiva.

A temperature may be taken, although the presence of fever does not interfere.

Place 4 or 5 drops, or 0.1 to 0.2 cc. of undiluted mallein, or of 5 per cent. solution of precipitated mallein within the lower eyelid with a dropper, glass rod, or camel's hair brush. The other eye is left untouched to serve as a control.

As soon as the mallein is applied, a flow of tears nearly always appears, with reddening of the conjunctiva and photophobia. These phenomena have no significance and disappear in several hours. The characteristic manifestations of a positive reaction begin in 5 to 6 hours and last 36 to 48 hours, sometimes longer. *A purulent secretion or discharge with reddening of the conjunctiva alone is significant of a positive reaction.* Swelling and gluing of eyelids may be seen in severe reactions.

The eyelid should be examined and compared in good light 16 to 18 hours after test is applied. The conjunctiva and the eyeball should also be included in the examination after noting the discharge. Generally the positive reaction is not accompanied by temperature rise or general reaction. The temperature variation does not occur in negative tests or normal animals. In positive reactions the rise may be observed in taking the temperature twice, the first time when the test is applied, and the second when the readings are made 16 to 18 hours later.

The results of the test are to be interpreted and recorded as follows:

1. Negative, N, eye unchanged.
2. Suspicious, S, sero-mucous discharge.
3. Positive, P-|-, sero-mucous discharge with purulent flakes.
4. Positive, P-|- -|-, Distinct purulent discharge.
5. Positive, P-|- -|- -|-, A purulent discharge with swelling of the lower eyelid.
6. Positive, P-|- -|- -|- -|-, Strong purulent discharge with gluing together of both lids.

If the result of the test is negative or questionable 24 hours after the first application, the test may be repeated at once on same eye or the control eye. If repetition is also negative or questionable, the test may be repeated in three weeks.

The intensity of this reaction bears no relation to the stage or development of the infection.

I recommend the adoption of this method by the Board, and hope and believe it will soon be adopted by all other States, as its advantages over the old, cumbersome method heretofore employed, are many and obvious.

CASES OF GLANDERS DURING THE YEAR 1918.

COUNTY	TOWN	MONTH	OWNER	NO. ANIMALS KILLED	REIMBURSEMENT
Hillbore.	Tampa.	January.	A. B. Giles.	1 mule.	\$ 75.00
Duval.	Jacksonville.	February.	T. M. Wanesby.	1 horse.	75.00
Pasco.	San Antonio.	February.	V. de Equivelley.	1 mare.	75.00
St. John.	Hastings.	February.	J. Levine.	1 mare.	75.00
Bradford.	Raiford.	March.	Renfro & Williams.	1 mule.	75.00
Bradford.	Lake Butler.	March.	Tom Haney.	1 mule.	75.00
Duval.	Lake Butler.	March.	Chas. Haney.	1 horse.	0
Duval.	Jacksonville.	March.	C. L. Mears.	1 horse.	0
Duval.	Jacksonville.	March.	A. & P. Tea Co.	1 horse.	75.00
Duval.	Jacksonville.	April.	Sam Wallace.	1 mule.	75.00
Duval.	Jacksonville.	April.	H. McDonald.	1 horse.	75.00
Duval.	Jacksonville.	May.	J. E. Chestnut.	1 mare.	75.00
Duval.	Jacksonville.	May.	Louis Baker.	1 horse.	75.00
Duval.	Jacksonville.	May.	Sam Wallace.	1 mule.	75.00
Duval.	Jacksonville.	May.	Jas. Jenkins.	1 mule, 1 horse.	150.00
Duval.	Jacksonville.	May.	Jno. A. Cunningham.	1 mare.	75.00
Duval.	Jacksonville.	June.	City of Jacksonville.	1 mule.	75.00
Dade.	West P. Beach.	June.	E. L. Wade.	1 horse.	75.00
Duval.	Jacksonville.	June.	Jas. Topham.	1 horse.	75.00
Duval.	Jacksonville.	June.	Ice Delivery Co.	1 mule.	75.00
Duval.	Jacksonville.	June.	Wm. Laurimore.	1 mare.	75.00
Duval.	Marietta.	June.	Cons. Grocery Co.	2 mules.	150.00
Duval.	Jacksonville.	June.	Unknown.	1 mule.	.00
Duval.	Jacksonville.	July.	T. Nooney & Sons.	1 horse.	75.00
Duval.	Jacksonville.	July.	T. Nooney & Sons.	4 horses.	300.00
Duval.	Jacksonville.	July.	R. B. Trantham.	1 horse, 1 mule.	150.00
Duval.	Jacksonville.	July.	C. C. Jones.	1 mule.	75.00
Duval.	Marietta.	July.	J. A. Oglesby.	1 horse.	75.00
Duval.	Jacksonville.	July.	Mary Lanier.	1 horse.	75.00
Orange.	Forest City.	July.	G. Bjorkander.	1 horse.	75.00
Duval.	Jacksonville.	August.		2 mules.	150.00
Duval.	Jacksonville.	August.		1 horse.	75.00
Duval.	Jacksonville.	August.		1 mule, 1 horse.	150.00
Duval.	Jacksonville.	August.		1 mare.	75.00
Duval.	Jacksonville.	September.		1 horse.	75.00
Duval.	Jacksonville.	September.		1 horse.	75.00
Duval.	Jacksonville.	September.		1 mare.	75.00
Duval.	Jacksonville.	September.		1 horse, 1 mare.	150.00
Duval.	Jacksonville.	September.		1 mule.	75.00
Duval.	Jacksonville.	September.	A. Permenter.	1 mare.	75.00
Duval.	Jacksonville.	September.	Gordon Permenter.	1 horse.	75.00
Duval.	Jacksonville.	October.	J. R. Bosley.	1 mule.	75.00
Duval.	Jacksonville.	October.	M. Corne.	1 mule.	75.00

Duval	Jacksonville	October	Geo. Sprague	1 horse	75.00
Duval	Jacksonville	October	City of Jacksonville	1 mule	75.00
Duval	Jacksonville	October	H. H. Spencer	1 horse	75.00
Duval	Jacksonville	October	W. E. Grace	1 horse	75.00
Osceola	Kissimmee	October	R. Franklin	1 horse	75.00
Duval	Jacksonville	October	S. Permenter	1 horse	75.00
Duval	Jacksonville	November	J. Safer	1 horse	75.00
Duval	Jacksonville	November	C. H. Cooman	1 horse	75.00
Duval	Jacksonville	November	S. Permenter	1 horse	75.00
Duval	Jacksonville	December	S. Permenter	1 horse	75.00
Total				63	\$4,425.00

A YEAR'S PROGRESS IN TICK ERADICATION EDUCATION.

On the 10th of June, 1912, I addressed a letter to the Chief of the Bureau of Animal Industry, stating I proposed to start a campaign of education upon the subject of tick eradication, in Florida. Two months later, the following reply was received:

BUREAU OF ANIMAL INDUSTRY.

Washington, D. C., August 16, 1912.

Dr. Charles F. Dawson, Veterinarian, State Board of Health,
Jacksonville, Fla.

Sir—Reference is made to your letter of June 10, 1912, in which you state it is your intention to start an educational campaign on tick eradication through your monthly publication, "Health Notes."

It appears that the State of Florida has not provided the necessary laws and regulations under which the Bureau can co-operate with you in conducting systematic tick eradication work. However, Dr. E. M. Nighbert, inspector-in-charge, Federal Building, Atlanta, Ga., who has immediate supervision for the Bureau over the work of tick eradication in the States of Georgia and South Carolina, will be instructed to arrange with you for a conference, and co-operate with you in your educational campaign in so far as he can with the means at hand.

Very respectfully,
A. M. FARRINGTON,
Acting Chief of Bureau

Dr. Nighbert, in later correspondence, suggested a meeting of stockmen for the purpose of initiating a movement having for its object the organization of the live-stock men. About this time the Agricultural College of the University of Florida was arranging for a meeting of agriculturalists, in December, 1912. The matter of having tick eradication on the program as a subject for discussion was suggested and met with the approval of the College authorities in charge of the program. The meetings were held on December 16th, 17th and 18th, 1912. There was a large number of persons present, and Drs. E. M. Nighbert, of the Bureau of Animal Industry, and Peter H. Bahnsen, State Veterinarian of Georgia, made effective addresses on the subject.

One of the results of the meeting was the formation of the Florida Live Stock Association, with Ex-Senator C. F. Barber, as President; Z. C. Chambliss, as Vice President, and Professor C. L. Willoughby, as Secretary. A constitution and by-laws were

adopted, and the Association was launched upon its career, having the active aid of the State Board of Health, the Federal Bureau of Animal Industry, and the Agricultural College of the State University.

As practical men, the Association realized that the best and most effective method of work was to favor the immediate building of dipping vats, that the people might see for themselves the vast benefits of ridding cattle of ticks by dipping. Mr. Barber was the first to build a dipping vat, and it was opened with imposing ceremonies at his plantation, near Macclenny, on February 22, 1913. Others followed in rapid succession, in all parts of the State, so that by the end of 1913, there were completed thirty-two vats, as follows:

CATTLE DIPPING VATS BUILT IN FLORIDA IN 1913.

ALACHUA COUNTY.

Bock & McDonald, Daysville, February.

A. L. Jackson, Gainesville, March.

P. G. Ramsey, Wacahoota, April.

John R. Zetrouer, Rochelle, May.

A. B. Zetrouer, Rochelle, May.

W. B. Phifer, Rochelle, June.

C. F. Harrison, Clyatts Station, July.

College of Agriculture, Gainesville, December.

BAKER COUNTY.

C. F. Barber, Macclenny, February.

R. Rooney, Baxter, October.

DUVAL COUNTY.

Riverside Dairy Co. (J. C. B. DeBevoise), March.

ESCAMBIA COUNTY.

Southern States Lumber Co. (P. K. Yonge, manager, Muscogee), November.

GADSDEN COUNTY.

State Insane Asylum (W. W. Trammell, superintendent), Chattahoochee, November.

HOLMES COUNTY.

W. A. Sessoms, Bonifay, November.

LEON COUNTY.

Leon County Live Stock Club, A. P. McCaskill, Tallahassee, April.

MARION COUNTY.

S. H. Gaitskill, McIntosh, April.

J. R. Williams, Citra, May.

Jack Camp, Ocala, July.

ORANGE COUNTY.

William Edwards, Zellwood, November.

OSCEOLA COUNTY.

E. L. Lesley, Kissimmee, May.

H. T. Bass, Southport, October.

PUTNAM COUNTY.

C. L. Whitehead, Hollister, September.

PASCO COUNTY.

Kirby Williams, Dade City, November.

C. A. Croft, Trilby, July.

SEMINOLE COUNTY.

J. C. Cameron, Geneva, November.

HILLSBOROUGH COUNTY.

Aug. Van Epoel, Tampa, August.

HAMILTON COUNTY.

H. S. McCallum, Winn, October.

JACKSON COUNTY.

J. W. Hinson, Cottondale, June.

LAKE COUNTY.

W R. Matthews, Leesburg, October.

SUWANEE COUNTY.

Frank Drew, Wilmarth, June.

ST. JOHN COUNTY.

F. E. Bugbee, Hastings, August.

Total—32.

In June, 1913, the Florida Legislature, in its wisdom, passed the following bill, and the same became a law on June 7, 1913:

(From Laws of Florida, 1913.)

CATTLE TICK ERADICATION.**Chapter 6434—(No. 14.)**

An Act to Provide the State Board of Health with Funds for the Eradication of the Southern Cattle Tick; to Authorize the County Commissioners of the Various Counties to Appropriate Funds to be Used in Such Work; and to Permit the Appointment of Federal Officials as Agents Without Pay.

Be it Enacted by the Legislature of the State of Florida:

SECTION 1. The State Board of Health is hereby authorized, empowered and directed to expend, under the regulations provided by existing law, such amounts as the Board may deem necessary and expedient, out of the funds derived from the operation of Chapter 4693, Acts of 1899, in the control and eradication of the Southern Cattle Tick, through the employment of State and County Agents, payment for labor and materials, and for any other expenditures that may be found useful and necessary in the prosecution of such work; and the Board of Health is hereby authorized and empowered, after investigation of suitable locations, and upon recommendation of the Executive Committee of the Florida State Live Stock Association, to construct cattle dipping vats in communities where such aid is deemed useful for demonstration and proper conduct of tick eradication work.

SECTION 2. The County Commissioners of any county of the State of Florida are hereby authorized and empowered to appropriate such amounts of money as they may deem adequate and necessary, for the purpose of co-operating with the officials of the State Board of Health in eradicating the Southern Cattle Tick, and in preventing contagious or infectious diseases of animals; or whenever funds for this purpose are raised by private subscriptions of individuals.

SECTION 3. The State Health Officer is hereby authorized and empowered to appoint officials of the United States Department of Agriculture detailed for co-operative work in the eradication of the Southern Cattle Tick, or the control or suppression of contagious or infectious diseases of animals in Florida, as

agents of the State Board of Health; Provided, that they act without pay from the State of Florida.

SECTION 4. This act shall become effective upon its passage and approval by the Governor, or upon its becoming a law without such approval.

Approved June 7, 1913.

In most cases, upon the completion of a dipping vat, representatives of the State Board of Health and of the Federal Government were present to superintend the preparation of the dip, the dipping of the cattle, and to deliver addresses. In the larger towns, our moving picture reel, showing the dipping of cattle, was run off in the theatres. In many cases, also, the Bureau of Animal Industry furnished an expert, Dr. A. C. Drach, to supervise the construction of the vat. Dr. Drach also made many trips with the Farmers' Institute corps, of the University, and delivered addresses.

The daily newspaper was also made a medium through which the educational campaign has been carried on, and the writer and others contributed a number of articles upon the subject to the columns of the Jacksonville, Tampa and Pensacola daily papers.

On December 17th, 18th and 19th, 1913, the Second Annual Meeting of the Florida Live Stock Association was held at the University of Florida, with a fair number in attendance. At the meeting, addresses were made upon many agricultural matters. The State Board of Health was represented by the writer, who delivered addresses upon "Hog Cholera," "Inter-State Shipments of Live Stock," and "Progress of Tick Eradication in Florida." Other addresses upon tick eradication were delivered by President C. F. Barber, and Drs. A. C. Drach and E. M. Nighbert, of the Bureau of Animal Industry. During the course of Dr. Nighbert's address, he said that the Federal Government had co-operated with the State of Florida for one year in its educational campaign, and while his department was satisfied with the progress made, it would be necessary to withdraw Dr. Drach from the State, as it was never contemplated keeping him in the State more than a year on educational work, and that when the State is ready to begin the actual work of tick eradication, along approved lines, Federal co-operation would be restored.

Of the thirty-two vats built in Florida, in 1913, nearly one-half were built without Government supervision. In fact, several were built without our knowledge, at the time. This is a favorable

symptom. It shows Floridians are intensely interested in tick eradication, and will not wait for any Government to do something for them that they think they can do for themselves. It shows that Floridians are a self-reliant people, and have not yet gotten into the habit of expecting something for nothing. Individuals will continue to build vats without help of any kind, because there are now a sufficient number in use to demonstrate that dipping cattle pays.

The difficulties of vat construction, the building of the forms and mixing the concrete, will be largely overcome by a firm which proposes to market a steel vat, already set up, of the same size and shape of the ordinary cement vat. This steel tank vat is sunk into the soil, and when the necessary fencing and cement floor dripping pen are installed, the outfit will fill all requirements. This tank will be sold for about a hundred dollars, and will largely solve the problem of building vats in those sections where the water table is near the surface. The address of this firm will be furnished on application.

In January, 1913, the writer was delegated by the Board to represent Florida before the Agricultural Committees of both Houses of Congress, at Washington, D. C., to help present the claims of the tick-infested States for an increased Federal appropriation. In common with the representatives of the other Southern tick-infested States, he made a statement of the conditions in Florida, and feels that he was proportionately instrumental in having the existing appropriation materially increased, and that, therefore, Florida should participate proportionately in the benefits of Federal co-operation.

While individuals may heroically tackle the proposition of ridding their herds of ticks, there can be no concert of action without government supervision. By this government supervision is meant supervision by national, state, county and municipal governments. Part of the responsibility for ridding the South of the tick, and thereby adding millions of dollars in value to southern agricultural interests, can not be permanently and successfully avoided by the various governments.

Tennessee is one State that has already come into her own by reason of having, after seven years of concerted effort, totally eradicated the tick. Mississippi is another State that is doing advance

work along the same lines. In Mississippi, the cost of eradicating the cattle tick has, in certain counties, been 50 cents per head. The average increase in the value of these cattle because of tick eradication is estimated at \$7 per head. In other words, these counties spent \$100,000 for tick eradication, and received at once a return of \$2,148,000 in the increased value of their cattle.

The following, from a Federal report upon the injury done hides by ticks, is germane:

According to figures gathered by one of the veterinary inspectors of the Bureau of Animal Industry, the presence of the tick among the cattle of the South not only lessens the value of the cattle on the hoof, but causes the gradings of hides that have been infested with ticks as No. 4 quality.

The same hide, if free from tick marks, would grade No. 2. The difference in price between these two grades of hides is 3 cents per pound. As the hide of Southern steers weighs about 42 pounds, the presence of the tick in the hide causes a loss in the hide alone of more than \$1.26 per hide. Government specialists point out that the cost of tick eradication is only 50 cents per head, so that if the counties make a systematic campaign to eradicate the tick, the increase in value of the hide alone would pay for the cost of tick eradication and leave the farmer a net profit of about 76 cents per hide.

The hide situation is becoming rather serious. A prominent tanner in Pennsylvania states:

"For the class of leather we make we prefer Southern hides for chrome on account of the close texture and fine grain, but on account of the ticks we have had to practically stop purchasing Southern hides."

This is particularly significant as the demand for chrome leather is increasing, so that the normal demand for Southern hides will be still further decreased.

A large percentage of the chrome leather now produced is finished with the grain left on so that all imperfections and tick marks on the grain side show very plainly. In the old days, when all the leather for uppers was made from bark-tanned stock, all leather was buffed and the grain was removed. For this leather tanners could use cheap hides that were covered with imperfections and tick marks and make fairly good leather. The situation today, as it has been explained, is very different, as the public is demanding more and more grained leathers for which large proportions of Southern hides will not be available until the tick is eradicated.

Tennessee will probably be the first state to be entirely free from quarantine for ticks. It already has eradicated the tick in 51 counties, and all that now remain under quarantine are parts of Marion, Wayne, Hardeman, McNairy and Decatur counties, and all of Hardin, Henderson and Chester counties. It is hoped that by September 1st these counties will be free from ticks and the entire State out of quarantine.

According to the specialists of the Department of Agriculture, it has cost less than 50 cents per head to eradicate the tick in Tennessee, and the cattle owners as a result have gained not less than \$7.00 per head, thus adding to the value of their stock. There are some 500,000 cattle in the counties already

free from ticks, and the immediate benefit to these owners has been not less than \$3,500,000. The cost of tick eradication has been only \$250,000, so that the investment paid for itself nearly 14 times over in a very short time. This does not include the additional profits which come from the fact that now that the tick is eradicated more cattle can be raised on each farm and that cultivated fields are made more productive by the increase of the amount of fertilizer now available.

Suppose, for the sake of being well within the estimate, that Florida cattle, on account of their supposed inferiority, were increased in value three dollars per head, as a result of tick eradication: It follows that our million head of cattle, as they exist today, would be increased in value \$3,000,000. Could the State afford to spend \$25,000 a year on such venture? We know, from experience, that with tick eradication, and with even tick control, comes a desire on the part of the stockman to improve his herd. We know that cattle weigh from 100 to 200 pounds more when kept free of ticks, and we also know that the meat sells for more, as also do the non-tick-bitten hides. All these items, when added to the improvement of agriculture brought about by tick eradication, brings the total value to a figure far in advance of \$3,000,000.00 for the future generation from the 1,000,000 head of cattle now in the State, even though the number is not increased, and the breed is not improved. It would pay the State to make a specific appropriation for eradicating ticks in some county that would agree to a "no-fence" law, as an object lesson. Hamilton County, from her geographical position and natural quarantine barrier—a river on three sides—would seem to offer the best facilities for such demonstration. However, any "no-fence" county would do as well. The "no-fence" law must come, as no approved tick-eradication work can be carried on without it.

EXTRA-STATE SHIPMENTS OF CATTLE.

Probably few citizens of the State realize the extent to which Florida is entering the cattle markets of the country. This has been brought about by the great demand for beef, and not because Florida cattle, generally speaking, could compete in the trade were the supply from more favored sections equal to the demand.

Thousands upon thousands of "scrubs" were shipped for feed-

ers and stockers to the Middle West last summer. That these shipments paid was proved by the fact that buyers returned for more and more. Such cattle, when put upon good pastures and fed by experts, put on about two hundred pounds more weight. When crossed with pure-bred bulls of the beef type, they produce a marketable half-breed of greater weight and finer beef. The same things can be done right here in Florida, and are being done now by some of our more progressive cattlemen.

This demand for Florida cattle has, naturally, caused an increase in the prices formerly obtained, and our cattle business has been stimulated to a considerable extent. As the demand for beef is ever on the increase, owing to increased population, and decreased production, our cattlemen need not fear the business, like so many others, will be overdone. What is wanted of the South is more cattle and better cattle. The United States, formerly an exporter of beef and cattle, has now become an importer of dressed meat. Beef is now actually being shipped from Australia and the extreme South American countries. Only the other day the office was notified of a large shipment of dressed beef from Montevideo, Uruguay, to Key West, Florida. Just how the Federal Government handled this shipment in the way of inspection has not yet been reported. To show the extent to which this is going on, the following is copied from "Weekly News Letter:"

IMPORTS OF CATTLE, MEATS, AND MEAT FOOD PRODUCTS DURING
OCTOBER AND NOVEMBER, 1913.

Imported cattle inspected by the Bureau of Animal Industry, United States Department of Agriculture, during October and November, 1913, numbered 209,327 head, as compared with 72,420 for the corresponding period of 1912. All came from Canada and Mexico except 447 head of pure-bred cattle, for breeding purposes, imported from Great Britain. The imports were classified as follows:

October—For immediate slaughter, 73,166; as stockers and feeders, 54,565; for dairy and breeding purposes, 739; total, 128,470. November—For immediate slaughter, 39,086; as stockers and feeders, 41,548; for dairy and breeding purposes, 223; total, 80,857. The bulk of the slaughter cattle came from Canada while Mexico furnished over four-fifths of the stockers and feeders.

Imported meats and meat food products inspected during October amounted to 6,000,735 pounds, and in November to 11,792,576 pounds, making a total of 17,793,311 pounds for the two months. The bulk of this consisted of fresh and refrigerated beef, 16,082,578 pounds. There were 275,847 pounds of

other fresh and refrigerated meats. The remainder consisted of cured and canned meats, 1,169,517 pounds, and other products (sausage, compound, and oleo stearin), 265,369 pounds. Of the total, Canada furnished 8,098,197 pounds; Argentina, 6,209,700 pounds; Australia, 2,725,142 pounds; Uruguay, 559,843 pounds, and other countries much smaller quantities.

The South now has a golden opportunity to become a greater agricultural section, and should not lose the opportunity of going in largely for cattle. We have the best cattle feeds in the country, and the South is the only section where lands are sufficiently cheap for grazing purposes. Being thousands of miles nearer the great beef markets, we can compete with foreign-grown beef. Necessity will compel the South to grow more and better cattle, and more feeds for them, as the cotton yield and acreage decrease from the ravages of the cotton boll-weevil. With the advance of the cattle industry will come an increased demand, in Florida, as it has already in other Southern States, for the eradication of the cattle tick, that pest which is largely responsible for the stunted cattle seen on every hand. It has been the history of every Southern State that as soon as a man rids his place of ticks he begins to improve his breed. As soon as he has done this, the buyer views Southern cattle the same as those from other sections, and pays the price the improved animal is worth. When Florida grows the kind of cattle that make real beef, the buyers will soon find it out, and come here and pay what they are worth, just the same as they do now for our citrus fruits and vegetables.

The movement out of Florida last summer of vast numbers of "scrub" stock meant only that a beef famine is threatened. Just as soon as the farms in the Middle West are re-stocked, these inter-State shipments will cease, i. e., for that grade of cattle. The buyers will want better cattle, and will expect to pay top prices for them. By far the largest number of cattle shipped last summer was bought here by Miller Bros., owners of the 101 Ranch in Oklahoma. As the Georgia law prohibits the unloading of ticky cattle anywhere in that State, the shipments were made through West Florida, to destination, where they were held in quarantine and dipped twice in ten days to free them of ticks. In addition to the above shipments, many others were made that did not come under the notice of this office.

The number of common cattle shipped under the auspices of

the State Board of Health and the Federal Bureau of Animal Industry, was 2,161 head. These were all dipped once in Florida and again at a more northern point within the quarantined area. When cattle are dipped once in Florida, they are immediately dipped again upon arrival at the northern vat, and are then allowed to proceed to destination; thus saving a ten-days' feed bill, over the method of shipping out of Florida without dipping.

There were over 25,000 head of these common cattle shipped out last year. It may be interesting here to delve into a little ancient history of the cattle business in Florida. The customs records show the following exportations of cattle from the State in past years:

In 1866 -----	1,627 head
In 1867 -----	7,089 head
In 1868 -----	2,869 head
In 1869 -----	2,933 head
In 1870 -----	7,285 head
In 1871 -----	15,177 head
In 1872 -----	21,285 head

It is highly probable that most of these cattle went to Cuba. Note the great increase in 1870-72, due to the Cuban rebellion in those years.

SHIPMENTS OF PURE-BREDS.

In addition to the shipments of common stock, Florida has been doing a little business in the pure-bred line, and when Floridians realize the vast market now opened up in the South to supply the demand for pure-bred bulls for improving herds from which the tick has been eradicated, the few breeders now in this business will be greatly augmented.

Some ten years ago the owners of a large tract of land eight miles west of Gainesville, known as the Spring Park Stock Farm, purchased a large number of prize-winning Hereford bulls and cows out of the show ring. It was said this herd was the best, in point of breeding, that had up to that time been shipped into the tick belt, east of the Mississippi River, from the west. The venture was looked upon with misgivings, as it was supposed that such cattle could never do well in Florida. That these fears were unfounded has been proved by time. The herd is still a fine one, and

the progeny has done well, and brought good prices, as breeders. Unfortunately, Florida did not, for several years, offer the owner of these fine cattle much encouragement in the way of purchasing the increase. Most of the sales have been made into other States, and one bull was shipped to Guatemala.

Recently we were called upon to give bills of health for shipments of pure-bred stock from this farm to points in other States, where they went as foundation stock for new herds that are being formed. These shipments were most important from a breeding standpoint, and demonstrated that Florida can grow good cattle, and may some day become the breeding ground for the South. Mr. W. E. Coffin purchased twenty head of these fine young bulls for his stock farm, on an island off Darien, Ga. Miller, Patton & Co. bought a fine yearling bull, which went to Eutaw, Ala. T. J. Shingler, of Donaldsonville, Ga., purchased nine bulls. Mr. J. B. Simonton, of Micanopy, breeder of Jerseys, shipped a fine Jersey bull calf to J. J. Kilpatrick, of Brantley, Ala. All these animals being for breeding purposes, it was necessary for them to be certified as free from tuberculosis, and that they had been dipped to kill any ticks that might infest them, the laws of Georgia and Alabama requiring such certificates.

As further and more important and convincing evidence that the South is to be the future cattle-producing section of the United States, the following is reproduced from the "Weekly News Letter:"

A significant feature of the 1913 International Live Stock Exposition at Chicago was the fact that, for the first time, two herds of cattle from below the old Texas fever quarantine line were exhibited in competition with cattle from all over the United States and Canada. The competition was very keen, as all kinds of animals were exhibited. This exposition was one of the most successful held since its inception in 1910.

The Shorthorn herd of the Lespedza farm, of Hickory Valley, Tenn., won a number of prizes at this exposition. This farm, three years ago, was said to be the worst tick-infested farm in the State, but is now free of ticks and has been released from quarantine.

The farm was released from quarantine only a year ago. The herd of Herefords at the International which won the grand championship for Hereford bulls with Point Comfort 14th, were from La Vernet Stock Farm, near Jackson, Miss. This bull was bred and raised in Arkansas below the quarantine line. He won strictly on his merits as a Southern bull, bred, raised, and fitted on Southern feeds and pastures. A yearling bull by Point Comfort 14th at the Hereford Association's sale on Friday afternoon, December 5, sold for

\$575, and a bull calf by the same sire at the same sale for \$440. These facts show the possibilities of the South as a breeding ground for fine cattle.

REQUIREMENTS BY OTHER STATES FOR INTER-STATE SHIPMENTS.

If a Floridian wished to ship a domestic animal out of Florida into another State, and interviewed his railroad agent upon the subject, he would, if the railroad agent has been kept posted, be informed that he either could not ship the animal at all, or that he would have to get a bill of health from the State Board of Health.

If a man in Wyoming, or in any State, for that matter, asked his railroad agent about shipping domesticated animals into Florida, the agent could tell him, "All right, bring them along, Florida is a wide-open State for the entry of animals." Does this mean that Floridians want diseased animals shipped in? We should say no; but that is the effect of our apathy in the matter. Florida buys from elsewhere all her horses and mules, i. e., excepting the native pony seen on the farm. She probably does this to a larger extent than any other State. Then why should Florida not place the same restrictions on inter-state traffic in animals that other States have found wise? While it is true Florida prohibits shipments into the State of animals that are known to be diseased, the burden of proof rests in determining that the shipper knew the animals were diseased, and this would be, in most cases, impossible.

In order to prevent the shipment of diseased animals into the State, rules and regulations should be adopted by the State Board of Health requiring all animals shipped in to be accompanied with a bill of health from the State Veterinarian of the State in which the shipment originates. Within the last year, we have had many instances where such precautions would have saved the State money, as well as the shipper, and finally, the citizens of the State, as individuals. Recently this office was notified that a man from Jacksonville was endeavoring to buy, in Atlanta, fifty-three head of milch cows that had reacted to the tuberculin test, thus showing they had tuberculosis. Fortunately for Florida, the Georgia law required the slaughter of these animals, to determine whether or not their carcasses were fit for food, or would have to be entirely destroyed. Here was a case, where fifty-three milch cows would

have been unloaded on Florida, and sold at good prices, as healthy cattle, because a tuberculous cow frequently shows no evidence of disease, and may appear in the "pink of condition." The same man did buy and ship into the State milch cows that were not tuberculin-tested, and the chances are that some of them were tuberculous.

There were sixty-three cases of glanders in Florida in 1913, fifty-two of the cases occurring in Jacksonville and its suburbs. For a while it seemed that the disease might reach the proportions of an epidemic. There is good reason to believe that certain dealers in Jacksonville had shipped in one or more car-loads of "reactors"—animals that had been tested with mallein and had shown that they were afflicted with latent glanders. Such animals might look perfectly sound. The dealers here might have been innocent of wrongdoing; but the shipper at Chicago, for instance, would know these animals had "reacted," buy them for a song, and ship them to this customer in Florida at a good price. Such animals might not show the disease for a year, by which time all suspicion would be diverted from the dealer. The State paid its share of the loss, nearly \$5,000.00, for glanders brought into the State by such animals. Were the losses confined to the dealer probably no comment would be made; but the dealer rarely lost on the deal, as he had collected his price, in most cases, by the time the horse "came down" with the disease. The loss to the innocent buyer was not due entirely to the value of the animal, but account should be taken of interference with his business, hiring of teams to substitute while his remaining stock was being tested by the State, and the resulting mental worry.

One saw-mill firm deliberately shipped in from Georgia a car-load of glandered mules. They were so far gone with the disease that one died at the railroad station after unloading. They eventually all died, and infected several other animals belonging to the same firm. When I asked the State Veterinarian of Georgia how many more glandered animals he was going to ship us from his State, he replied: "Just as long as Florida will receive them; the original case in that outbreak came from Jacksonville, anyway."

It should be understood by the Board that, in adopting rules and regulations requiring all animals shipped into Florida to come with a bill of health, Florida is put to no expense worth mention-

ing. The trouble and expense is on the shipper and officials of the State in which the shipment originates. There are few States to-day that have not adopted uniform rules and regulations similar to those I here recommend, as is shown in the following:

SANITARY REQUIREMENTS OF THE STATES GOVERNING ADMISSION OF LIVE STOCK.

ALABAMA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for breeders, dipping for ticks; for hogs, health certificate.

ARIZONA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, held at destination, isolated for two weeks.

ARKANSAS—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, vaccination against cholera when for fairs.

CALIFORNIA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

COLORADO—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, affidavit they are free from cholera.

CONNECTICUT—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

DELAWARE—For horses, none; for cattle, tuberculin test; for hogs, none.

DISTRICT OF COLUMBIA—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

FLORIDA—For horses, none; for cattle, none; for hogs, none.

GEORGIA—For horses, none; for cattle, health certificate, tuberculin test and dipping for ticks; for hogs, none.

IDAHO—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, must be immunized against cholera.

ILLINOIS—For horses, none; for cattle, none except Texas Fever; for hogs, none.

INDIANA—For horses, certificate for soundness; for cattle, tuberculin test; for hogs, health certificate.

IOWA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and immunization against cholera.

KANSAS—For horses, health certificate and mallein test; for cattle, health certificate, tuberculin test and dipping for ticks; for hogs, immunization against hog cholera.

KENTUCKY—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination of hogs for fairs.

LOUISIANA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

MAINE—For horses, mallein test; for cattle, tuberculin test; for hogs, 90 days' quarantine on owner's place.

MARYLAND—For horses, health certificate; for cattle, tuberculin test; for hogs, health certificate.

MASSACHUSETTS—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

MICHIGAN—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

MINNESOTA—For horses, health certificate and mallein test; for cattle, tuberculin test; for hogs, health certificate.

MISSISSIPPI—For horses, health certificate; for cattle health certificate and tuberculin test; for hogs, health certificate.

MISSOURI—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs health certificate.

MONTANA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NEBRASKA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NEVADA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, none.

NEW HAMPSHIRE—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

NEW JERSEY—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

NEW MEXICO—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, none.

NEW YORK—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NORTH CAROLINA—For horses, health certificate for breeders; for cattle, health certificate and tuberculin test; for hogs, health certificate when for breeders.

NORTH DAKOTA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

OHIO—For horses, none; for cattle, health certificate and tuberculin test; for hogs, health certificate

OKLAHOMA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

OREGON—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

TENNESSEE—For horses, health certificate, free from ticks; for cattle, health certificate and tuberculin test; for hogs, from stockyards for immediate slaughter only. (No cattle from Florida under any circumstances).

TEXAS—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

UTAH—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

VERMONT—For horses, health certificate and mallein test; for cattle, permit required; for hogs none.

VIRGINIA—For horses, none; for cattle, health certificate and tuberculin test; for hogs, health certificate.

WASHINGTON—For horses, health certificate; for cattle tuberculin test; for hogs health certificate.

WEST VIRGINIA—For horses, none; for cattle, none; for hogs, none. (Rules now being formulated in West Virginia).

WISCONSIN—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

WYOMING—For horses, health certificate, for cattle, health certificate and tuberculin test; for hogs, health certificate.

In connection with this article, the following recommendation made to Congress by the Secretary of Agriculture is of great interest and importance:

**CONGRESS ASKED TO PROHIBIT MOVEMENT OF TICKY CATTLE BEYOND THE
QUARANTINED AREA.**

The Secretary of Agriculture has recommended that Congress repeal the provision in the law of 1884, establishing the Bureau of Animal Industry which permits the shipment of cattle from the Texas fever region by rail to market for slaughter. This law was passed before the nature of the infection and its transmission by ticks were understood. The effect of the change would be to place Texas fever on the same basis as other communicable diseases and to prohibit the interstate movement of tick-infested cattle. Since the eradication of the ticks has been shown to be entirely practicable, there is no longer any good reason for allowing the shipment of ticky cattle outside of the quarantined area, especially since this is now attended with danger of reinfesting some of the territory that has been freed of ticks.

The Secretary's recommendation to Congress was unanimously indorsed by the Southern Cattlemen's Association at its recent convention in Memphis, and also received the approval of the United States Live Stock Sanitary Association at its recent Chicago meeting.

Under the proposed change in the law, cattle could be shipped interstate from the quarantined area only after they had been dipped or otherwise freed of ticks, but when so shipped they would be free from quarantine restrictions on account of Texas fever and would not have to be sold for immediate slaughter.

It is believed that this change would be of great advantage in promoting the eradication of the ticks in the South, and also in protecting the territory already freed.

On December 5th, 1912, the United States Live Stock Sanitary Association, then in annual session at Chicago, received and adopted the report of the committee appointed to draft regulations which should be uniform for all the States. These regulations are herewith presented with the recommendation that Florida adopt the same. It is also recommended that copies be sent to all State Veterinarians and Live Stock Sanitary Officials, as well as all transportation companies in the United States.

**REPORT OF THE COMMITTEE ON UNIFORM REGULATIONS, PRESENTED TO AND
ADOPTED BY THE UNITED STATES LIVE STOCK SANITARY ASSOCIATION,
AT CHICAGO, DECEMBER 5, 1912.**

SECTION 1. The importation by railroad, boat, in wagon, by express or other common carrier; on hoof or in any other manner, of live stock diseased or exposed to disease into the State of (Florida) is hereby prohibited; and to determine which fact the following regulations shall be observed by all persons, firms, transportation companies, corporations, express companies and other common carriers; State Veterinarians and all other officials, State and Federal, authorized to inspect and issue certificates of health for live stock.

SECTION 2. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import bulls, work oxen or female cattle over six months old not intended for immediate slaughter, into the State of (Florida), must procure before shipment a health certificate and a tuberculin test chart in triplicate from a veterinary inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian, or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the cattle are to be transported or moved. The original of this health certificate and tuberculin test chart must be attached to the waybill. The duplicate health certificate and tuberculin test chart must be sent to the State Veterinarian or proper official at destination in ample time to reach him before the arrival of the cattle.

The triplicate health certificate and tuberculin test chart must be sent to the proper state official at place of origin. The health certificate and tuberculin test chart must show that the cattle are free from Texas fever, ticks, tuberculosis and all contagious, infectious and communicable diseases. The tuberculin test* chart must show that at least three temperatures were taken before injection of tuberculin two to three hours apart, and five temperatures were taken after injection two hours apart, beginning ten hours after the tuberculin was injected.

SECTION 3. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import horses, mules or asses into the State of (Florida) must procure before shipment or movement in any other manner a health certificate and a mallein test** chart in triplicate from a Veterinarian, Inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian, or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the horses, mules and asses are to be transported or moved. The original, duplicate and triplicate copies of the health certificate and mallein test chart shall be handled as certificate and tuberculin test chart as provided for in Section 2. The health certificate and mallein test chart must show that the horses, mules, or asses are free from all contagious, infectious and communicable diseases, and the test chart must show that at least three temperatures two to three hours apart taken before injection and five temperatures were taken after injection two hours apart, beginning ten hours after the mallein was injected.

* Or other approved test.

** Ophthalmic test will be accepted.

SECTION 4. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import sheep or goats in the State of (Florida) for purposes other than immediate slaughter, must procure before shipment or movement in any other manner a certificate of inspection issued by an inspector of the United States Bureau of Animal Industry, certifying that the sheep or goats are not affected with any contagious, infectious or communicable disease, including scabies, and that they have been dipped once within ten days of time of entry into the state in either a nicotine or lime-and-sulphur dip which has been approved by the United States Bureau of Animal Industry. Provided, however, that sheep and goats, not accompanied by certificate as above indicated, may be shipped by rail or boat to points within the State of (Florida) if billed to or through public stock yards where Federal government inspection is maintained, and there unloaded and dipped under the supervision of an inspector of the United States Bureau of Animal Industry.

SECTION 5. It is hereby ordered that any person, firm or corporation or any common carrier wishing to import swine into the State of (Florida) for purposes other than immediate slaughter must procure before shipment or movement in any other manner a health certificate in triplicate from a Veterinary Inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the swine are to be transported and moved. The original duplicate and triplicate copies of the health certificate shall be handled as certificates and tuberculin test chart as provided for in Section 2. The health certificate must show that the swine are free from all contagious, infectious and communicable diseases and have been immunized against hog cholera by the Dorset-McBride-Niles Serum not more than thirty days prior to shipment.

SECTION 6. It is hereby ordered that cars, boats and other vehicles used in the transportation of all live stock into or within the State of (Florida) shall first be cleaned of all litter, washed and disinfected with a mixture made with not more than 1-2 pounds of lime and 1-4 pound of pure carbolic acid to each gallon of water or liquid cresolis compositus (U. S. I.) six (6) ounces to every gallon of water.

LIST OF LIVE-STOCK MEN IN FLORIDA.

The following is a list of live-stock men in Florida, as compiled by the Animal Industry Department of the University of Florida:

CATTLE BREEDERS.

SHORTHORN CATTLE—Z. C. Chambliss, Ocala; J. R. Shuler, Bristol; A. L. Jackson, Gainesville; S. H. Gaitskill, McIntosh; Marion Farms, Ocala; Carson Bros., Kissimmee.

HEREFORD CATTLE—N. A. Callison, Gainesville; Magnolia Farms, Muscogee; J. R. Shuler, Bristol; W. A. Sessoms, Bonifay.

JERSEY CATTLE—Aug. van Epoel, Tampa; Miles Johnson, Tallahassee; E.

H. Gould, Oneco; Jack Camp, Ocala; A. L. Vidal, Gainesville; J. S. Goode, Gainesville; C. H. Simpson, Milton; William Edwards, Zellwood; R. C. Shaw, Quincy.

GUERNSEY CATTLE—A. L. Daughtry, Gainesville; J. S. Goode, Gainesville; C. L. Willoughby, Gainesville.

SWINE BREEDERS.

BERKSHIRES—William Edwards, Zellwood; Oscar Williams, Muscogee; Richard C. Shaw, Quincy; W. A. Sessoms, Bonifay.

DUROC JERSEYS—W. B. Willett, Maitland; H. H. Whitworth, Ocala; J. C. Henry, Live Oak; C. H. Simpson, Milton; L. B. Thompson, Pensacola, R. No. 1.

SHEEP BREEDERS.

Walker Bowers, Freeport; Dan King, Louanna; W. A. McCollum, Laurel Hill; Eugene Miller, Freeport; Alex Steele, Point Washington; Hutch Cawthon, DeFuniak Springs; John McCollum, DeFuniak Springs; John McSween, DeFuniak Springs; Dyer & Daniels, Wetappo; W. M. Gist, McIntosh; Ridge & Gale, Belleview; B. P. Keep, Boardman; George E. Mead, Cantonment.

RANGE CATTLE AND MISCELLANEOUS.

Adams, F. L., Tampa; Ayer, Alfred, Ocala; Beville, E. M., Gainesville; Baird, Ed., Gainesville; Beville, John Jr., Gainesville; Barton, R. L., R. No. 4, Gainesville; Battenau, W. J., Bristol; Barry, W. T., Wade; Badger, James, Berlin; Bass, Rull, Kissimmee; Bass, Tom, Kissimmee; Bugbee, F. E. Hastings; Bradshaw, J. P., Archer; Bailey, Asa, Wauchula; Blitch, J. S., Montbrook; Brantley, R. A., Tampa; Barco, B. B., Box 320, Tampa; Bryon, Willie, R. No. 3, Tampa; Barco, A. B., Boulevard Box 140, Tampa; Branch, C. L., Plant City; Brodly, W. G., R. N. 3, Ybor City; Brooks, S. H., Zuber; Beville, Henry, Bushnell; Brown, Sam, Sopchoppy; Barber, C. F., McClenny; Barrs, J. J., Micanopy; Berry, A. E., Bowling Green; Carmichael, C., Ocala; Cromartie, D. S., Reddick; Cannon, O. P., Gainesville; Coe, Ray M., Hastings; Caskine, L. J., Dade City; Coachman, S. S., Clearwater; Calhoun, J. C., Perry; Conway, Charles, West Toco; Chambliss, Flake, Greenwood; Coxetter, S. V., Lloyd; Chaires, E. P., Old Town; Cunningham, Nelson, R. No. 3, Tampa; Colclough, C. A., Gainesville; Croft, J. N., Trilby; Chaires, McQueen, Old Town; Clark, D. A., Martel; Carr, W. J. S., Kissimmee; Cleveland, A. C., Fort Pierce; Carter, Graham, Levyville; Davis, J. R., Bartow; Deadman, Wm., McIntosh; Drew, Frank, Live Oak; Drummond, John W., Janney; Dudley, Harvey, Gainesville; DeBush, E. F., Tampa; Dix, S. G., Ybor City; Dobson, Elijah, Olustee; Dupont, C. A., Hastings; Edwards, S. J., Fort White; Edwards, D. G., Gainesville; Eville Bros., Palatka; Epperson, J. B., Williston; Feaster, A. J., R. No. 5, Gainesville; Fonda, John L., Madison; Forbes, Mr., R. F. D., Dover; Fletcher, T. A., Mallory; Fulford, C. A., Bonifay; Fletcher, J. N., Mallory; Goodbread, A. S., Lake City; Grantham, R. M., Pine Level; Godwin, W. R., Whittier; Gaskins, L. J., Dade City; Green, P. W., Prof., Pedro; Gibbons, G. H., Archer; Gunn, S. J., Otter Creek; Harrison, James, Micanopy; Howell, J. C., Anthony; Hiers, J. M., R. No. 1, Trenton; Highsmith, W. H., R. No. 1, Trenton; Hardee, E. R., R. No. 2, Trenton; Hardee, Silas, R. No. 2,

Trenton; Hardee, John, R. No. 2, Trenton; Hendry, J. E., Fort Myers; Henderson, R. A., Fort Myers; Haile, Evans, Gainesville; Hughes, D., Ponce de Leon; Haynesworth, J. E., Haynesworth; Howell, C. B., Martin; Howell, E. L., Anthony; Hancock, J. S., Miakka; Howard, J. B., Gainesville; Holly, J. H., Gainesville; Harrison, G. W., R. No. 5, Gainesville; Hardy, G. C., Florahome; Henry, J., Ybor City; Henderson, W. T., Lynne; Hudson, J. W., Dade City, R. F. D.; Imeson, George, Tampa; Ives, A. M., Jacksonville; Johnson, Walter H. Pine Barren; Jolly, M. E., Orange Heights; Jones, Drew, Williston; Keen, J. M., Lakeland; Knight, C. L., Tampa; Knight, L. W., Alachua; Kincaid, W. C., Gainesville; Kincaid, John, Gainesville; Lauchlin, A. J., Fairfield; Lee, John M., Kissimmee; Lightsey, W. A., Bartow; Lowman, B. B., Raleigh; Lightsey, W. E., R. F. D. 3, Tampa; Lightsey, L. L., Tampa; Lewis, W. H., Fort Meade; Langford, R. G., Fort Meade; Mann, H. T., Mannville; McDonald, C. H., Cottage Hill; McKinnon, Theo. DeFuniak Springs; McCaskill, A. P., Tallahassee; McKinstry, W. R., Gainesville; McDonald, S. D., Gainesville; McDonald, T. E., R. No. 2, Gainesville; McElroy, W. B., R. No. 1, Trenton; McElroy, C. W., R. No. 1, Trenton; McCollough, J. H., Orlando; Meffert, J. M., Ocala; Mills, George F., Cottage Hill; Mikesell, B. P., St. Cloud; Mitchell, D. C., Gotha; Mizell, M. F., Pine Level; Miller, J. W., Kissimmee; Matthis, W. H., Mallory; Mobley, T. E., Hastings; Mobley, H. J., Dade City; Murphy, Garrett, Bradentown; Mitchell, J. J., Elfars; Moyer, S. N., R. F. D., Tampa; Matlock, S. S., Tampa, Tribune; Mobly, Thomas, Alachua; Means, S. D., Hague; Means, L. E., Gainesville; Mansfield, G. H., Gainesville; Means, T. B., R. No. 4, Gainesville; Meder, W. F., Foley, Ala.; Marshall, J. E., R. No. 3, Trenton; Miller, Eug., Freeport; Whitmyre, B. D., Milton; Mann, George W., Bartow; Miller, L. P., Berlin; Neubeck, J. P., Palatka; Osteen, K. E., Osteen; O'Berry, J. F., Kissimmee; Paisley, John, Williston; Perryman, A. D., Janney; Page, S. H., Bartow; Phelps & Morrison, Bartow; Page, T. W., Bartow; Phifer, W. B., Gainesville; Prince, E. E., Rochelle; Pearson, E. C., Alachua; Porter, Dr. F. W., Tampa; Parrish, H. J., R. F. D. 2, Tampa; Parker, Will, Tampa; Prevatt, J. B., Largo; Perkins, George B., Tallahassee; Rowe, B. H., McClenny; Roberts, A. H., Fort Myers; Redding, R. H., Ocala; Rooney, J. D., Ocala; Robles, F. M., Judge, Tampa; Rawlerson, K. B., Fort Pierce; Register, L. C., R. No. 4, Jasper; Roberts, George, No. 3, Tampa; Roe, C. O., Clermont, Ala.; Ramsey, James P., Gainesville; Roach, J. M., Williston; Rawls, J. N., Williston; Register, W. R., Woodville; Ray, Walter, Leroy; Rawls, I. N., Montbrook; Randall, G. I., Williston; Revels, E. H., Bristol; Sistrun, M. M., Montbrook; Smith, Dr. H. C., Madison; Studstill, H., R. No. 2, Trenton; Stringfellow, J. D., Gainesville; Stevens, C. W., Alachua; Sitterlind, J. E., St. Andrews; Summerlin, Jasper, Bartow; Skipper, David, Wauchula; Skipper, Lee, Zolfo; Stidham, C. M., Bartow; Smith, Henry, Wauchula; Skipper, E. E., Bartow; Smith, G. W., Wauchula; Shaw, J. L., Alachua; Smith, J. L., Alachua; Stephens, C. W., Alachua; Sparkman, C. R., Waldo; Shands, T. W., Gainesville; Strickland, W. A., Gainesville; Simmons, Irvin, LaGrange; Seward, W. H., Arcadia; Strom, S. H., Juniper; Spencer, H. F., Tallahassee; Sims, J. A., Bonifay; Smith, J. C., Center Hill; Sampson, F. G., Quincy; Turner, Dr. W. L., Elzey; Towles, W. H., Fort Myers; Taylor, W. L., Quincy; Thomas, W. R., Gainesville; Triplett, S. J., Kissimmee; Thomas, E. A., Arcadia; Tucker, W. P.,

Arcadia; Van Dozor, W. L., Kissimmee; Varn, Berry, Brooksville; Wicoff, W. W., Taft; Wilson, W. D., Bartow; Wilder, S. H., Plant City; Walker, Hirsch, Wacissa; Woodruff, Seth, Orlando; Wilson, Chauncy, Brooksville; Whitmire, Barney; Whitfield, W. H., R. F. D., Tampa; Williams, J. E., Ybor City; Wood, W., R. F. D., Ybor City; Worthington, J. E., Tampa Times; Wilder, R. L., Tampa; Worth, Fred, Tampa; Williams, Charles, Alachua; Wood, H. D., Evinston; Williams & Phillips, Zolfo; Watts, N. F., Bartow; Wood, J. N., Levyville; Wells, T. L., Chipley; Zetrouer, A. B., Rochelle; Zetrouer, Andrew J., Gainesville.

DAIRYMEN.

GENERAL.

W. P. Beard, Quintette; Mr. Bradford, Bradfordville; C. M. Burroughs, Bay City; J. A. Caple, Miami; D. G. Edwards, Gainesville; L. G. Hine, Miami; B. H. Hinson, Hanson; W. R. Newell, Leesburg; E. C. Beuchles, Anthony; Millwood Farm Co., Reddick; Jones & Goodwin, Winter Haven; H. H. Witherington, Apopka; Stafford Burgis, Leesburg; A. M. Flanery, Ocala; S. D. McDonald, R. No. 2, Gainesville; George H. Mansfield, Gainesville; A. H. Willet, Orlando; J. D. Mackey, Cantonment, R. No. 1; J. T. Ransley, Cantonment, R. No. 1; T. E. Maxey, Cantonment, R. No. 1; C. C. Simpson, Cantonment, R. No. 1; J. A. Stewart, Cantonment; R. No. 1; W. B. Weaver, Cantonment, R. No. 1; H. H. Whitworth, Ocala; W. G. Tilghman, Palatka; W. L. Taylor, Quincy, Box 359; J. T. Hall, Hastings.

ST. PETERSBURG DAIRYMEN.

P. L. Miller, 40; Henry Belcher, 35; D. L. Sellers, 60; W. J. Wells, 29; D. E. Houser, 12.

DAIRYMEN OF JACKSONVILLE.

G. F. Abarding, care Tennessee Produce Co.; J. W. Arpen, Route 3; J. S. Brandies, Box 881; J. W. Church, 1304 W. Church street; J. C. DeBevoise, Route 4; Firdenn & Mills, Route 4; W. H. Greek, Route 4; G. C. Jennings, Route 3; S. W. Matt, Route 1; George L. Miller, 1217 Rushing street; Edward Niles, Route 1; H. J. Pound, South Jacksonville; G. H. Sprague, Myrtle avenue and Church street; A. Studebaker, Box 863; Fred Williams, 1113 W. Duval street; H. C. Arpen, Route 3; Frank Bartholf, Route 1; Jennie Clarkson, Route 2; Thomas Dansen, Box 285; I. E. Glover, Route 1; James Jennings, Route 2; V. C. Johnson, Dinsmore, Fla.; J. R. McKinley, Box 476; A. J. Mosley, Route 4; W. J. Nolan, Route 1; Thomas Smith, Route 2; W. J. Smith, Highway Branch P. O.; W. T. Stewart, Tallyrand avenue; R. Winkleman, General Delivery.

PENSACOLA DAIRYMEN.

Adams, Mrs. DeL.; Anderson, A. J.; Adams, M.; Bayliss, J. E.; Burns Dairy; Boyer, H. H.; Brainard, T. M.; Berchire, A. O.; Bradley & Wright; Brown, W. E.; Cronise, C. B.; Coons, J. W.; Curtis, William; Davis, C. T.;

Duncan, H.; Freeman, Mrs. C. E.; Garfield, W. S.; Hall, J. W.; Haynes, J. E.; Horrell, Ira G.; Howell, I. C.; Jefferson, O. W.; Jernigan, R. F.; Jones, S. J.; Lambert, A. C.; Moore, W. W.; Mason, W. E.; Magnolia Dairy; Marble, J. W.; Myrtle Grove Dairy; Quina, A. L.; Robinson, Rix M.; Reeves, G. W.; Ridley, R.; Roberts, E. J.; Saunders, E. E.; Still, J. R.; Stewart, F.; Sheppard, W. C.; Simon, W. O.; Stephenson, A. W.; Stidown, Doc; Tait, H. E.; Tracy, W. T.; Though, Alex.; Vontura, D.; Wilkins, Estelle; Wright, J. A.; Williams, J. M.; Williams, M. C.; Williams, E. B.; Wilson, Mrs. L. E.; Wedmyer, C. C.

TAMPA DAIRYMEN.

J. D. Gaetano, Lake avenue and Fifteenth street, 16 cows.
 D. Testasicca, Fifteenth street, Ybor City, 23 cows.
 R. Ferlita, Fortieth street, Ybor City, 24 cows.
 N. Disalve, Fortieth street, Ybor City, 15 cows.
 G. Guarliardo, Fortieth street, Ybor City, 25 cows.
 N. Disalve, Fortieth street, Ybor City, 15 cows.
 S. Digiaca, Fortieth street, Ybor City, 12 cows.
 S. Dine, Fortieth street, Ybor City, 12 cows.
 T. Spoto, Oak Park, R. F. D., 42 cows.
 A. Caccitore, Oak Park, R. F. D., 18 cows.
 J. Caccitore, Oak Park, R. F. D., 18 cows.
 B. Fernandez, Oak Park, R. F. D., 25 cows.
 J. Gonzalez, Oak Park, R. F. D., 20 cows.
 B. L. Sumner, Oak Park, R. F. D., 11 cows.
 J. W. O'Berry, Oak Park, R. F. D., 26 cows.
 V. Coniglio, Oak Park, R. F. D., 34 cows.
 J. Peromie, Oak Park, R. F. D., 21 cows.
 Walter Johnson, Oak Park, Ybor City, 28 cows.
 Joe Cutro, Oak Park, Ybor City, 30 cows.
 A. Capitano, Oak Park, R. F. D., 40 cows.
 D. Valiti, DeSoto Park, R. F. D., 15 cows.
 G. Galasso, Michigan avenue and Forty-third street, 17 cows.
 A. Spoto, Oak Park, R. F. D., 24 cows.
 Joe Bigico, Oak Park, R. F. D., 30 cows.
 Antonuo Massora, Oak Park, R. F. D., 30 cows.
 F. Diaz, College Hill, R. F. D., 75 cows.
 P. Lalla, College Hill, R. F. D., 10 cows.
 O. Romano, College Hill, R. F. D., 40 cows.
 Ferlita & Reina, Twenty-fourth avenue, R. F. D., 70 cows.
 G. Parlafrinano, Twenty-third avenue, R. F. D., 12 cows.
 F. M. Sprague, Boulevard, R. F. D., 40 cows.
 A. B. Farco, Grand Central avenue, R. F. D., 30 cows.
 H. V. Barco, Grand Central avenue, 47 cows.
 F. S. Bray, Rocky Point, R. F. D., 80 cows.
 R. S. Clark, 316 Twiggs street, R. F. D., 40 cows.
 S. L. Lyman, North Florida avenue, R. F. D., 40 cows.
 S. T. Baker, Nebraska avenue, R. F. D., 40 cows.
 W. M. Drew, Nebraska avenue, R. F. D., 21 cows.
 A. A. Fisher, Buffalo avenue, R. F. D., 35 cows.

D. S. Fisher, Buffalo avenue, R. F. D., 30 cows.
 D. S. Fisher, Buffalo avenue, R. F. D., 48 cows.
 W. A. Fisher, Buffalo avenue, R. F. D., 38 cows.
 T. W. Lane, Buffalo avenue, R. F. D., 80 cows.
 C. C. Nelands, Nebraska avenue, R. F. D., 80 cows.
 J. W. A. Norton, Hanna avenue, R. F. D., 40 cows.
 A. J. Youngblood, Hyde Park, R. F. D., 28 cows.
 J. Zamilito, West Tampa, R. F. D., 15 cows.
 R. Caetano, West Tampa, R. F. D., 30 cows.
 D. F. Fonti, West Tampa, R. F. D., 40 cows.
 G. Nicolletto, West Tampa, R. F. D., 40 cows.
 R. Fernandez, West Tampa, R. F. D., 35 cows.
 T. Alferio, Thirty-third street, Ybor City, 20 cows.
 G. Alferio, Thirty-third street, Ybor City, 20 cows.
 D. Mulitello, Thirty-third street, Ybor City, 24 cows.
 L. Coletto, Thirteenth street, Ybor City, 15 cows.
 Mrs. M. Varoni, Lake avenue and Fifteenth street, 20 cows.
 G. Bartolotto, Lake avenue and Fifteenth street, 20 cows.
 M. Phillips, Twenty-seventh avenue, R. F. D., 10 cows.
 S. Glafagl Ione, 1804 Ninth avenue, Ybor City, 10 cows.
 G. Triano, Fifteenth street and Fifth avenue, R. F. D., 15 cows.
 Guisippi Bejicue, Twelfth street and Forty-first street, R. F. D., 12 cows.
 Tampa Stock Farm, South Tampa, R. F. D., 50 cows.
 W. J. Hancock, Nebraska avenue, R. F. D., 7 cows.
 G. B. Carter, Police Station, R. F. D., 7 cows.
 Kosa, Palmetto Beach, R. F. D., 4 cows.
 W. M. Holland, Florida avenue, R. F. D., 3 cows.

(NOTE—All the dairymen addressed Ybor City, or R. F. D., should be addressed 1804 Ninth avenue, as they all call here daily.)

COUNTY CATTLE IMPROVEMENT CLUBS FORMED DURING 1913:

Alachua County—A. L. Jackson, Pres., Gainesville.
 Baker County—Elijah Dobson, Pres., Olustee.
 Columbia County—A. S. Goodbread, Pres., Lake City, R. F. D. 5.
 DeSoto County—W. H. Seward, Pres., Arcadia.
 Hillsborough County—F. L. Adams, Sec'y, West Tampa.
 Leon County—A. P. McCaskell, Pres., Tallahassee.
 LaFayette County—W. H. Matthis, Sec'y, Old Town.
 Marion County—John L. Edwards, Pres., Ocala.
 Osceola County—E. L. Lesley, Pres., Kissimmee.
 Pasco County—H. J. Mobley, Pres., Dade City.
 Polk County—W. H. Lewis, Pres., Ft. Meade.
 St. Johns County—A. C. Dupont, Pres., Hastings.

LIVE-STOCK ESTIMATES FOR FLORIDA FOR 1913

The live-stock estimates as compiled by the U. S. Dept. of Agriculture for the year 1913, and further elaborated by the writer, are as follows:

	No. in 1913	Number Jan. 1 1914	Value each in 1913	Value each Jan. 1 1914	Total Value in 1913	Total Value Jan. 1, 1914	Increase in value	Increase in number
Horses	53,000	55,000	\$118.00	\$122.00	\$6,254,000	\$6,710,000	\$456,000	2,000
Mules	26,000	27,000	152.00	168.00	3,952,000	4,536,000	584,000	1,000
Dairy Cows	123,000	128,000	36.00	38.00	4,428,000	4,864,000	436,000	5,000
Beef Cattle	766,000	735,000	12.50	14.00	9,345,000	10,070,000	725,000	(Decrease 31,000)
Swine	878,000	904,000	5.90	6.00	5,180,000	5,424,000	244,000	26,000
Sheep	119,000	118,000	2.10	1.90	250,100	224,000	(Decrease 21,700)	(Decrease 1,000)

	In 1913	Jan. 1, 1914	Total increase value of livestock in 1913
Total value of horses and mules	\$10,206,000	\$11,246,000	
Total value of cattle	13,773,000	14,934,000	
Total value of all live-stock	29,409,000	31,828,000	\$2,419,000

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I take pleasure in transmitting the annual reports for 1913, of Assistant Veterinarians Munsell and DeMilly, with the recommendation that they be published as part of this Annual Report of the Veterinary Division.

Yours very truly,

CHARLES F. DAWSON,

Veterinarian.

REPORT OF DR. W. A. MUNSELL

ASSISTANT VETERINARIAN.

Green Cove Springs, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I herewith submit a report of my work as Assistant Veterinarian, for the year 1913.

My services began April 15th, 1913. From that date to December 31st, inclusive, I have been detailed fifty-eight times upon cases as follows:

To investigate for glanders, 25 times.

To administer hog cholera serum and appoint agents, 12 times.

To certify to dipping cattle for shipment, 9 times.

To special investigation for disease, including tick fever, etc., 10 times.

To give tuberculin test, 2 times.

Complete details are given in tabulated form following.

Respectfully submitted,

W. A. MUNSELL, D. V. M.,

Assistant Veterinarian.

DATA ON GLANDERS CASES

DETAILS OF HOG CHOLERA WORK

CATTLE CERTIFIED FOR INTERSTATE SHIPMENT

DATE		SHIPPER	DESTINATION
May 7-9	Kissimmee	B. L. Lesley	Kansas
21	Kissimmee	L. E. Muz	Ohio
June 2-7	Kissimmee	E. L. Lesley	Kansas
25	Tallahassee	C. B. Elam	East St. Louis
July 6		E. L. Lesley	Kansas
Oct. 9-10		(Did not ship on account of Tennessee Quarantine)	
Dec. 8		N. A. Callison	Georgia
Dec. 22		N. A. Callison	Alabama
29	Gainesville	N. A. Callison	Georgia
30	Micanopy	J. B. Simonton	Alabama
		1047	
		96	
		998	
		50	
		36	
		20	
		1	
		9	
		1	

INVESTIGATION OF TICK FEVER AND SPECIAL CASES

DATE	PLACE	OWNER	ANIMALS	DIAGNOSIS
July 3-4	Gainesville	A. L. Jackson	Cattle	Tick Fever
25-27	Gainesville	Jackson & Kincaid Bros.	Cattle	Tick Fever and Hookworm
Aug. 4-5	Gainesville	Jackson & Kincaid Bros.	Cattle	Tick Fever and Hookworm
Sept. 8	Lake Helen	Mrs. Watson	Cattle	Tick Fever
16	Alachua	T. A. Mobley	Cattle	Food Poison
23		R. M. Chamberlain	Cattle	Food Poison
25		F. W. Munson	Cattle	Hookworm
Nov. 26-27		C. A. Carson	Cattle	(Inspection cattle)
Dec. 15		Bugbee	Cattle	Tick Fever
April 17-19	Glen St. Mary	G. L. Tabor	6 cows	Tuberculin tested, Negative
Dec. 30-31	Micanopy	J. B. Simonton	17 Cattle	Tuberculin tested, Negative

REPORT OF DR. J. W. DE MILLY

ASSISTANT VETERINARIAN.

January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I respectfully submit herewith a report of my work as Assistant Veterinarian for the year 1913.

In addition to my reports of administration of hog cholera serum and the appointing of hog cholera agents, I assisted in the tick eradication educational work in various ways.

The following is a list of hog cholera agents appointed:

County.	Town.	Agent.
Alachua	Archer	W. J. Jones
Bradford	Stark	D. W. Alvarez
Clay	Middleburg	W. W. Hamilton
Clay	Middleburg	M. M. West
Citrus	Citronelle	R. L. Priest
Citrus	Citronelle	W. F. Sutton
Columbia	Lake City	S. W. Lamb
Duval	Jacksonville	John Farmer
Hamilton	White Springs	W. M. Bennett
Leon	Bloxham	D. W. Stoutamire
Leon	Chaires	W. J. Graham
Liberty	Sumatra	R. D. Fryer
Levy	Rosewood	M. B. Coarsey
Marion	Bay Lake	E. F. Wilson
Marion	Cottonplant	Judge Beal
Polk	Bradley Junction	J. C. English
Polk	Bradley Junction	W. H. Surency
St. Lucie	Sebastian	W. F. Boughman
St. Johns	Dupont	Dr. D. B. Brown
St. Johns	Dupont	E. Z. Boor
Washington	Panama City	D. R. McDaniels

The following is a report of work accomplished in the administration of hog cholera serum:

Date	County and Town	No. Hogs Treated	Serum Used
Jan. 12	Alachua—Newberry -----	8	200 cc.
Jan. 17	Bradford—Stark -----	9	200 cc.
Jan. 17	Bradford—Stark -----	6	150 cc.
Jan. 19	Clay—Middleburg -----	6	150 cc.
Jan. 23	Hamilton—P. O. Lake Park, Ga. -----	92	1900 cc.
Feb. 5	Leon—Tallahassee -----	16	395 cc.
Feb. 12	Leon—Springhill -----	36	1000 cc.
Feb. 19	Leon—Tallahassee -----	4	135 cc.
Feb. 19	Leon—Tallahassee -----	30	670 cc.
Feb. 22	Citrus—Inverness -----	26	590 cc.
Feb. 23	Columbia—Lake City -----	41	895 cc.
Feb. 27	Hamilton—White Springs -----	6	130 cc.
March 1	Polk—Bradley Junction -----	55	1325 cc.
March 1	Polk—Bradley Junction -----	32	715 cc.
March 6	Liberty—Sumatra -----	36	850 cc.
March 14	Alachua—Archer -----	28	800 cc.
March 20	Washington—Panama City -----	72	1875 cc.
March 20	Washington—Panama City -----	8	170 cc.
March 28	Leon—Tallahassee -----	22	655 cc.
March 28	Leon—Tallahassee -----	22	530 cc.
April 10	Jefferson—Lloyds -----	13	330 cc.
April 10	Jefferson—Lloyds -----	25	480 cc.
April 17	Osceola—Kissimmee -----	5	250 cc.
April 22	Leon—Tallahassee -----	11	245 cc.
May 8	Leon—Tallahassee -----	10	290 cc.
June 23	Levy—Williston -----	33	885 cc.
July 13	Wakulla—Helen -----	27	685 cc.
July 28	Leon—Chaires -----	34	810 cc.
July 28	Leon—Chaires -----	16	560 cc.
Aug. 3	Columbia—Lake City -----	76	1500 cc.
Aug. 3	Columbia—Lake City -----	21	365 cc.
Aug. 13	Marion—Cottonplant -----	21	505 cc.
Aug. 25	St. Johns—Dupont -----	5	110 cc.

Yours very truly,

J. W. DE MILLY,

Assistant Veterinarian

APPENDIX

**ADDRESS OF THE
CHAIRMAN OF THE SECTION OF PREVENTIVE
MEDICINE AND HYGIENE**

DR. JOSEPH Y. PORTER

SOUTHERN MEDICAL ASSOCIATION

AT

LEXINGTON, KY., NOV. 17-20, 1913

(Printed by the Southern Medical Journal, Feb., 1914.)

In bidding you welcome to the section of Preventive Medicine, permit me to express my appreciation and gratification at the goodly number present. It is reasonable that we should expect to have with us health officers, and members of Boards of Health; nevertheless, it is likewise gratifying to see that there are many here, whose chosen line of professional study does not particularly direct thought to subjects which are only discussed in a gathering of this character. It is a matter of great gratification to note the interest, which is yearly increasing, in the subject of preventive medicine, and more than this, the universal acknowledgment by the laity that to prevent sickness is equally as noble and Christlike a calling, as it is to cure; a paradoxical admission, it is true, to the usual conception of the layman, who views this activity of the doctors "as working themselves out of a job." This is not true, however, and may be said to be a positive contradiction, for in well governed communities, where sanitary requirements are rigidly enforced and followed by the people, the medical practitioner thrives better financially than where little or no heed is given to tenets for good health.

So, after all, the sanitarian and the general practitioner of medicine have no differences to meet or harmonize, in the method of

each to earn a livelihood, for in their own peculiar way, they are aiding humanity by helping to prolong life.

I, therefore, bid you, one and all, a cordial welcome to this section, earnestly praying that your deliberations may result in great good, and that by insisting upon practical application of ideas and principles, which have been gained by experience and investigation, we may retain the confidence we have inspired, in what we have taught, and to so continue to teach in the future, that the most ignorant cannot fail to imbibe a few truths; seeds, as it were, dropped by the wayside, to spring up to fruitful harvest in years to come. For, my co-laborers, we are not working solely for the good of the present generation, for it is in the future "coming forth" of men and women, that the optimist in sanitation hopes and looks forward to a realization of cherished ideals. It is a homely adage, but a true one, that: "It is difficult to teach old dogs new tricks," and it is equally true, that in the application of this saw, we can scarcely hope, in the older persons, to overcome all of the false notions or prejudices, or whatever term you may choose to call them, of the fixed ideas of the "grown-ups" of today, which in early life they imbibed. It is in their children that we hope for future good results of our teaching of today.

The last year has yielded a fairly good harvest in practical methods, and I may say, discoveries, which contribute to the health benefit of the human family. The United States Public Health Service, always active and always alert, has subscribed in a large measure to the advancement of the cause. Its officers have answered appeals from the states where help has been asked for, to investigate outbreaks of sickness, which required more time, and a greater attention to detail work, than the average health officer of a municipality could give. The published findings of these studies have been interesting, and what is more, greatly instructive. I think that we all will voice our appreciation of the help which we have derived from this Service. The states themselves, especially those connected with our own Association, have not been tardy in pushing measures tending to advance the health interest of the human family; and by press service, literature on special subjects, and by bulletins and monographs, state and municipal organizations have cir-

culated useful and practical information on methods and measures to preserve health and prevent sickness.

It is believed that a better condition of sanitation throughout the Southern States has resulted from these educational methods. I know that this is true as regards my own State, Florida, for never in the history of this State, has there been such an active interest manifested in health matters as at the present time, and this interest is not one of mere curiosity to gratify an inquisitiveness into the unusual; but a real desire to obtain information on subjects of practical methods of healthful living, which will be to the advantage of both the individual and the community. When the people begin to ask questions, and to show an eagerness for information on this or that subject relating to rightful and proper living, then the Health Officer is encouraged in his efforts, and with increased enthusiasm tries to present more forcefully, sanitary facts which experience has proven to be effective and fruitful and consequently of lasting benefit. An inquiring community is sure to be composed of an intelligent group of thoughtful citizens, especially so as regards matters which affect the health of themselves or their families, and I may add, too, the general welfare interest of the business of the city, town or section of the country. A community of this kind fills the health officer with zeal and enthusiasm in his work, and stimulates his faculties to a still greater endeavor.

It is the attitude of the indifferent and apathetic community which sends a chill down the spinal column of the health officer. A community which treats the whole subject of sanitation as a fad of the doctors, and does not believe in germs and "such like nonsense," is a difficult proposition, and a discouraging problem for the health officer to deal with: a community that insists that malaria comes from a miasm, and that mosquitoes have nothing to do with chills and fever; who, if considering the subject of health at all, construes sloth and civic indifference to appearances as indicating sanitary nuisances, or matters conducing to ill health, and ignores the weightier matters of typhoid prevention. Communities of this description dishearten all efforts for their welfare or health betterment.

When small communities aspire to city airs, actuated by a wish for police protection as well as pride of locality, the citizens usually

organize as a municipality with the various offices pertaining to such a government. Very often the prime motive which prompts to such action is called into existence by a feeling on the part of thoughtful citizens of the place that if sanitary conditions are to be bettered, then some form of government is absolutely needed to enforce any requirements of healthful living. But very often, the mistake is made by a sanitary committee of a council, or the health officer, if one should be appointed, to think it their duty to indulge in theory of disease, and disease-producing agents, rather than to appreciate those causes of possible sickness which lie almost immediately under their eyes. Again, too, unsightliness and litter are confounded with, or thought to be, sanitary nuisances, but they are not, for such carelessness is in no way inimical to health.

Theorizing on matters pertaining to sanitation, grasping at the shadow and letting go the substance, gains nothing in the way of confidence of the people or of practical benefit to the individual or community, but does earn for the health officer a reputation of being a visionist and an unsafe teacher. In a period of forty odd years, engaged in health work, I have run up against many of these kind of men, who, although anxious to do their duty, seem to think that they cannot accomplish the full quota of work, and earn their little stipend (because health officers, as a rule, are the poorest paid of any of the city officials, for the amount of genuine hard work that they do), unless they are working out some speculative idea in sanitation or chasing a rainbow of impossible cause of disturbed health in the community in which they live. And not only do inexperienced health officers make the mistake of entertaining fads, but the solid men of the town or community, as Councilmen, will wrangle and dispute over trivial matters, such as cutting weeds, to destroy a thought-to-be miasma producing malaria, when a weightier subject, such as preventing a spread of typhoid fever by screening surface closets against flies, gives them no uneasiness or concern. One would think that in this age of scientific progress a case of leprosy or smallpox would scarcely disturb the placidity of the waters of a well directed health organization, but is it so? Do we not every day, see communities become excited over either one or the other, on the slightest pretext or occasion, and what is more to be deplored and condemned, vociferously demand a quaran-

tine against such persons, forgetting that in the case of smallpox and diphtheria absolute immunity is given by vaccination and by the use of antitoxin, and furthermore, that leprosy is only slightly contagious.

As much as I regret to say so, too many health officers give encouragement to such crude and false ideas and notions. Moreover, I am inclined to believe that too much importance of late has been given for a purely theoretical advantage to the cause of public health, to the supposed "carriers" of certain diseases, those persons who are otherwise in health, have certain disease germs in their system, and I would sound a note of warning against too great a popularizing of this idea. I am not disputing the fact that there are individuals who harbor in their bodies certain disease germs, but if, at the same time, they show no clinical symptoms of the disease of which these germs are the distinguishing feature, the query to my mind is this: "Are these germs always virulently active and a source of danger to those who may come in contact with such individuals, who are otherwise healthy?" Theoretically, and if obeying the dictum of the laboratory, these individuals should be isolated even when accidentally met with, and excluded from public places and the rest of well mankind. Practically, is this a sensible and reasonable procedure? Is it possible, or will it be to the advantage of the cause of public health, to enforce such a rule? When it is estimated that in the city of Washington, D. C., alone, the number of typhoid carriers reaches approximately three hundred and more, who are not known, and who can never be detected except by accident, and that in the great city of New York, based on population, it is also estimated that there are about ten thousand carriers of typhoid walking the streets, plying their usual occupations, and totally unconscious of being a menace to public health, it can plainly be seen that to segregate or isolate one or two of such cases will be very much like guarding the spigot, while the bung-hole is open. As I understand the present-day teaching in this respect, bacteriologists basing their opinions altogether on their laboratory findings, and doctrinal teachings, would seemingly exclude every individual having a diphtheria bacillus in the mouth or throat, from general mingling with the public, irrespective of clinical or epidemiological history. Practically and in every day life and liv-

ing, this will be found an impossible procedure, and it would seem to be unsound teaching, because it has been found that an examination of the throats of individuals taken haphazard, in a large percentage of cases will show the presence of diphtheria bacilli, without any clinical symptoms being present, or the individuals themselves being aware of the fact or experiencing any discomfort or in the slightest degree cognizant of being otherwise than in perfectly good health.

I am not so certain, and in fact very much doubt, whether the germs of some diseases are without certain changes capable of an infectivity in other persons, which will produce the pathological phenomena resulting in clinical symptoms, especially denotive of the particular deviation from normal health. Perhaps I do not make myself quite as clear in this statement as I would like to, and if said in another way, it will be that certain bacilli which we consider pathogenic when found in persons otherwise healthy, and having no clinical evidence of the disease of which these germs are thought to be productive, are harmless except under conditions which a specific action induced by a lowered condition of the vital force of the individual may call into play. Whatever may be the reason, and speculative sanitation should not be considered, I am opposed to any unnecessary inconveniencing of the public, entailing oftentimes hardships and expense, when the public health will not be materially guarded thereby.

I very much doubt, too, whether the campaign against the common drinking cup as the means or cause of spreading disease is based upon actual facts obtained by experience, and is not a speculative menace in a great measure. If the purpose of the ban now placed upon the common drinking cup is to induce cleanliness, and is to be an educational measure in that direction, then I am heart and soul with the movement. The evidence of disease contamination by the common drinking cup is lacking to a great degree. Certainly as regards tuberculosis, because the Secretary of the Anti-Tuberculosis Association of the United States, writes me there are no records in his office of the disease ever having been propagated or spread by the use of the common drinking cup. A search of literature elsewhere gives the same negative finding. If the vessel is washed out and cleansed after each using, I fail to see

the danger lurking in its use, that does not also hold good for drinking vessels in hotels, restaurants or homes, after they have been used and cleansed.

I may be voicing a heresy, for which I shall be criticised and maybe lose my "Union Card," but believing in practical sanitation, and in the application of reasonable and rational methods for the preservation of health which an intelligent public will accept and adopt, and not class as a fad, I cannot subscribe to impracticable methods based too often on speculation, and theory.

Just a word more, because I do not intend that this paper shall be more than a welcome and a presentation of some thoughts for the section to think over—accept or reject in their wisdom. It is indeed a matter for devout thankfulness to note the interest which yearly is increasing in efforts towards suppressing tuberculosis in this country, especially that form of the disease generally known as "pulmonary consumption." Organizations for this purpose, national, state and local, have done an immense amount of good work in this direction, and statistics show that if only a slight decrease in number of cases and mortality can be claimed, because of these efforts, still the disease is not on the increase and the general conditions for control seem to be more promising. What I would direct your attention to in connection with the management of this disease, is, the difference in manner of management which must be followed in the different sections of this vast country. A method followed in the colder sections of the United States is totally unsuited for the warmer latitudes, and as this Association is composed mainly of southern medical men, I wish to suggest this thought; That whatever of good or of possible benefit we may hope to give the consumptive of our section, it must be obtained from the open air treatment altogether, and in this particular the country south of Mason and Dixon's line is better adapted for the undertaking than the more northern climates. I believe that sanatoria for consumptives must be of the open air construction to be of any material benefit, either in prolongation of life, promoting a more comfortable existence, or the hope of possible cure, and I am opposed to buildings of brick or of wood, for the purpose. These are nothing more than hospitals for the treatment of this class of sufferers. Sanatoria projected on the general plan of the Fort Stanton system

of tent houses, where the patient virtually lives in the open air, are better calculated to do good—make conditions more comfortable and to hold out a hope of permanent benefit.

Brick and wooden constructed buildings for treatment of this class are little more than hotels for the well-to-do, and cheap boarding houses for the poorer classes. They are places for seclusion and segregation of those whose affliction will not in one instance admit them to fashionable tourist resorts, and in the other instance poor farm institutions for the indigent “down and outs.” In my opinion, neither are efficient or effective of good to the unfortunates who are forced to enter them.

I have noticed in my reading quite recently that in Massachusetts there is a disposition to suspend the construction of any more sanatoria for the indigent class suffering from pulmonary tuberculosis, on the ground that it is impossible to gather in all who are suffering, and that those who are unknown and uncontrolled by the State are creating conditions which it is impossible to counteract, and that the expense, therefore, of maintaining tuberculosis sanatoria is vastly out of proportion to any benefit which can be hoped to be gained in the construction of additional buildings for this purpose.

Just here, let me pause to read you what Dr. Henry P. Walcott, Chairman of the State Board of Health of that State, is reported as having lately given expression to:

“Henry P. Walcott, Chairman of the State Board of Health put a quietus on all further talk about ‘compulsory isolation’ of consumptives in sanatoria in Massachusetts by pointing out, yesterday, to the recess committee on tuberculosis, that there are at least 40,000 cases of identified tuberculosis in this State. The impossibility of attempting to treat all those cases, with perhaps 30,000 other cases of suspected infection, in state sanatoria, was self-evident. Dr. Walcott also made it plain that the present State law leaves it wholly to the discretion of the State Board when, if ever, a city or town shall be ordered to build a sanatorium, and also that it is only upon the direct refusal of a city or town to comply with an order, that any penalty can be imposed. Inasmuch as no time is specified in the law, within which a city or town shall build, it is clear that unless it can be shown to the courts that a community has ‘refused’

or 'neglected' to build, after a specified order, the present law imposes no penalty.

"On the whole, the testimony of the State's greatest expert was very damaging to the cause of the advocates of 'compulsory isolation.' After Dr. Walcott had completed his testimony, the scheme for crowding a large percentage of the population into sanatoria appeared both ridiculous and hysterical."

Open air sanatoria require large areas and landed reservations to accommodate races and sexes, with additional space to devote to mild and moderate exercise and occupation in horticultural or agricultural employment. I believe agreeable occupation to be an important factor of treatment. Those who are physically able, should be given gentle occupation, for the treatment of pulmonary tuberculosis is, and must be, both psychological as well as material if decided benefit is looked for. It is in a great measure for this reason that I am opposed to hospitals—for that is all the house sanitarium is—for the care of the pulmonary tuberculous. In the outdoor management of these cases the patient is given or offered agreeable occupation without undue exertion, and the diversion of mental faculties from his own trouble and anxiety. There is in the open or outdoor treatment an opportunity to get away from that distress of mind which constantly hangs over the head of each sufferer, for in so doing, the opportunity for reciting to each other the distresses which oftentimes are greatly exaggerated and dwelt upon, are lessened. Without mental occupation and diversion systematically applied, with, of course, good food and abundance of space for lung exercise, I am doubtful of any benefit which can be gained anywhere by the consumptive.

Where it is not possible for the State to provide ample space for the needed accommodation of races and sexes in an open air sanitarium for the indigent cases—for it is only this class that the tax payers can be called upon to provide for, and then only on the ground that unprovided for they are a serious menace to the health of the rest of society—then I am of the opinion that the State or municipality had better abandon altogether the idea of sanatoria, or a general sanitarium, and substitute therefor a corps of trained nurses, to travel the State, hunt out the pulmonary consumptive, and by advice and continuous assistance, teach the individual sick one,

as well as the other members of the family in methods best adapted to present conditions, which will aid the sufferer to more comfort, and perhaps ultimate cure, and at the same time protect the other members of the family from contagion. In the long run, I believe that this system will prove to be more effective in helpfulness to the consumptive and a decidedly more economical method of rendering assistance. In the rural districts the open air treatment of pulmonary consumption can easily be carried out under proper instruction, if the individual is willing to be taught and will follow advice. A floored tent some little distance from the home building, comfortably fitted up so as to be home-like in appointments, is all that is necessary in the way of outdoor requirements, for palatable food can be served from the home and without danger to the health of other members of the family. They can, under proper and well observed conditions, be companionable to the invalid loved one, thus robbing the partial isolation of homesickness, the curse which falls upon all those suffering from this disease who are separated from relatives and friends. May I ask you to seriously consider this proposition? Calculate the expense, and compare it with the cost of maintaining a large sanitarium on the open-air plan. I have no data on hand to offer you in this line, but my opinion is, that at the end of five years it will be found that more sick of this disease have been reached, and benefited, by advice and practical training, than could have been gathered together in a hospital or even in an open-air institution; and with this advantage, that they will not be separated from loved ones, and the companionship of those who help to make life agreeable while it lasts. Neither do I believe that under the instruction which will be given by a nurse of the corps such as I have outlined the duties of, that the presence of the individual sufferer will be a menace to the rest of the family. I am looking forward to Florida's taking a positive stand in this direction within the next twelve months, by inaugurating a system such as I have suggested, and hope to be able to also give you a favorable report on the utility of the measure when we next meet.

At the last meeting of the Southern Medical Association in Jacksonville, I had the pleasure of expressing to the Section on Hygiene and Preventive Medicine, some views that I entertained in regard to practical sanitation; things people should know, and be

taught, and contrarywise, what their minds should be disabused of, concerning false ideas and antique notions. Now with your permission I propose to continue this line of thought, because I believe no more important work can be done by the health officer of to-day, than to teach practical and common-sense methods in sanitary management, and to emphasize especially the advantage which education and educational measures will have in spreading this knowledge among the people. Even at the risk of ringing a chestnut bell on myself and becoming tiresome in repeated pleading for this most important manner of diffusing useful information to the public, I feel, nevertheless, that in addressing this Section of Preventive Medicine I can do no better service to the Association at large, or to offer the individual members and attendants on this section better advice, than to impress upon them this truth, that the health officer, to command the confidence of a community and the respect of the citizens, must be practical in his views and unmistakably clear in the manner in which he expresses them. Principles of sanitary knowledge lie fundamentally in cleanliness: It is the keystone by which the arch of general healthful living is firmly supported. Without strict attention to these tenets the whole structure of sanitation must fall. It can be seen, therefore, that to be successful in helping a community or any of its citizens, and directing them how to avoid conditions which impair health or health conditions, the health officer must be a close student of human nature, with senses so acute that each individual case or individual himself can be analyzed for such needed attention, counsel or advice, as his temperament ostensibly requires. Neither communities nor citizens will place their faith in theoretical health officers, and the general public is right in thereby withholding their trust; for there is certainly enough to be done and worked out on this earth, without seeking for problems in the clouds.

The distinguished Health Officer of Winnipeg very truthfully says: "No sanitary improvement worth the name will be effective, whatever acts you pass or whatever powers you confer on public officers, unless you create an intelligent interest in the public mind."

So it is apparent, that faith and confidence in the clear-headedness of sanitary teachers must first be earned before the public will accept from them any instruction or teachings.

The whole question, therefore, of public health hinges upon the individual in his relation to society. Effort should be made to impress this fact, that the individual is responsible not only to himself, but to the community in which he lives, has an obligation to fulfill to his neighbor, and that too much dependence should not be placed upon the parental authority or assistance of government, either of state or nation, to correct errors of living which the individual himself can easily overcome by exercising common sense and reason.

Simmered down, the dogmas of healthful living find their birth in education, and any future benefit to the human kind, whatever it may be, which sanitarians hope to bring about, must come from correct impressions made on children in their education, and the school room must be the soil in which the seeds of this knowledge are to be sown.

My distinguished predecessor, Dr. Dowling, as Chairman of this section, has done more in his State to bring about a clearer conception of hygienic requirements than could have been effected by tons of distributed literature. The eye will take in and receive impressions that will be lasting and will be remembered, which the ear oftentimes fails to appreciate the importance of; and it is by means such as he employs, pictures graphically shown upon the screen, charts, models, and clearly represented facts, which explain in themselves more emphatically than one can tell of, that we may expect the future improvement of the race.

The moving picture reels showing the disgusting habits of the fly, the evolution of malaria and filaria, and other parasites of the mosquito, are educational methods which impress the thinking observer, and are important lessons which, when seen, are learned, not soon to be forgotten.

In a cursory, and perhaps disjointed, way I have tried in my suggestions to point out the great need of practically applying our knowledge of sanitary science. In dealing with the public what we positively know about preserving health or preventing disease or destroying disease agents, let us tell, and explain and take the public into our confidence concerning all that we really do know; but by all means, avoid speculation and theorizing, for nothing destroys faith in a health officer's judgment so much as a wavering

and unstable opinion based on speculation and theory. I have purposely embraced in this argument two disputed methods of disease transmission because, as a menace to health, and to the well, there is much conjecture and guess work. No one can confidently state that bacilli carriers in a non-virulent state and without producing clinical symptoms, are capable of creating in a well and non-carrier person, the peculiar disease of which they stand as a type, and the evidence is wanting, likewise, so far as the common drinking cup is concerned. To exclude both on the common ground of "injurious to health" without proof, is to seriously inconvenience the public in its freedom of action. After all is said and done, human nature is, and always will be, human nature to the end of time, and although easily molded to public opinion, when rationally presented with facts, yet, when the curtailment of rights is asked for by the sanitarian and the request is based merely upon supposition and theory, then this same yielding public becomes adamant in opposition and loses faith in the correctness of judgment and wisdom of the would-be-teacher. Therefore, if the advice of one who has been engaged in this work for nearly half a century is worth considering, I say to you, be practical in methods which you offer as safeguards of the public health. In other words and homely said: "Keep both feet on the ground."

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STATE BOARD OF HEALTH OF FLORIDA

TWENTY-SIXTH

ANNUAL REPORT

of the

STATE BOARD OF HEALTH

OF FLORIDA

1914

APPROVED BY THE BOARD IN ANNUAL SESSION, MARCH 16, 1915

JACKSONVILLE, FLORIDA

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1915

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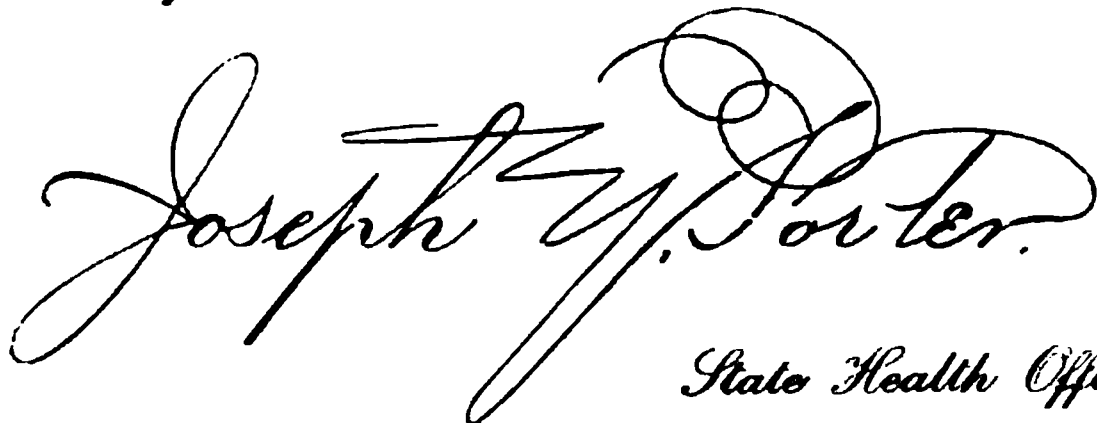
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LETTER OF TRANSMITTAL

Palatka, Fla., March 16, 1915.

HON. PARK TRAMMELL,

Governor of the State of Florida, Tallahassee, Fla.

DEAR SIR:—I take pleasure in handing you the annual report of the State Health Officer for the year 1914, which embraces a recital of the activities of the Board during the year as well as a detailed statement of the expenditures in the maintenance of health management and health protection of the people of Florida.

Introduction

I am exceedingly happy to be able to say to you that the general health of the State for the year 1914 has been remarkably good.

General health of the State.

From the four largest cities of the State, three of which are in the registration area for deaths, of the U. S. Bureau of the Census, the record shows a combined crude death rate during the past year of 17.5 per one thousand population, of which the white rate was 14.5 and the colored 22.1. Eliminating deaths of reported non-residents (those of less than six months residence at place of death) the combined rates are: For white residents 12.3, colored residents, 20.6, all residents 15.6. The estimated population of these four cities is 165,691.

Death rate for four largest cities of State.

A large proportion of the State Health Officer's report is devoted to preventable diseases, their causes and their hindrance, and his arguments as to why the people of the State should not take advantage of the measures which science in its progressive advance has clearly demonstrated to be useful agents in keeping well, and in warding off many illnesses which heretofore have been thought to be necessary to run a specified course, are tersely and concisely put forth.

Referring to the State Health Officer's report concerning preventable diseases.

I heartily concur in the opinion expressed by the State Health Officer in his conclusions in regard to this subject.

I trust that you may find it convenient to give your attention to what he has said thereon, and will make mention in an approving way of the salient points of the report in your next message to the Legislature.

Efforts of the State Board of Health to educate the people in disease prevention.

It is to be regretted that indifference to the subject of preventable disease and the remedies which have been brought forth of late to interrupt such illnesses as well as to adopt measures to prevent the same should not have been more closely heeded by the people of the State. If followed the people would have enjoyed health and been better off financially. Certainly the State Board of Health has made persistent endeavor in this direction to educate those who could read, by pamphlets, press articles, and monthly publications, so that it would seem that there cannot be any reasonable excuse for any adult in the State not being thoroughly informed on the proper remedial preventives against the four principal preventable diseases: smallpox, typhoid fever, diphtheria and malaria.

Estimated cost of preventable disease.

The State Health Officer gives an estimate of ten thousand dollars which it has cost to care for the indigent smallpox patients alone. The taxpayers of the State should not have had to spend this amount if vaccination had been accepted and practiced and it seems unjust to those who heed advice and take advantage of counsel in this respect, to be compelled to bear the burden for the neglect, indifference or perverse opposition by those who refuse to protect themselves by this simple means. It has been estimated that it has cost the State at least \$75,000 to care for all the preventable diseases occurring during the past year in investigating source, determining the character of special ailments, and in a hundred other ways connected with the management, have the taxpayers of the State been called upon to defray an expense due entirely to disregard, ignorance or perverse opposition.

Taxpayers of the State called upon to defray expense of preventable disease.

Abolishing quarantine.

I am in favor of abolishing all civic or domestic quarantine measures in regard to smallpox and in fact, I believe that the term "isolation" or "segregation" would be the better one to apply to other contagious disorders. I am convinced, as the State Health Officer says, that when the State furnishes an insurance to its people free of cost, by vaccination against smallpox, and the people refuse, then those who are bearing the penalty of their neglect or refusal to accept this gift of the State, should be required to defray all expenses connected with

their sickness. A warning card to the public that smallpox exists on the premises and that unvaccinated persons should "keep out," is all I think should be necessary to inform, caution and protect the public. Neither am I forgetting that there is a class of indigents living from hand to mouth, who, if attacked with this sickness, must be looked after. But I am also of the opinion that to remedy this, vaccination among this class should be made compulsory by the State. I would go a step further and insist by legislative action, that large bodies of men should not be permitted to be brought into or employed in the various industrial plants of the State unless they are individually, successfully vaccinated, or unless the employers agree to defray all expenses attendant upon the occurrence of cases of smallpox in their camps.

Vaccination made compulsory by the State under certain conditions.

Several years ago the Board of County Commissioners in Dade, Duval, Escambia and Hillsborough donated tracts of land to the State Board of Health with the specific understanding that the Board would erect thereon isolation hospitals for the care of smallpox cases. There was a further understanding in the covenant between the State Board of Health and the County Commissioners that when the land ceased to be operated for the purpose set forth in the instrument of conveyance, then the land would revert, with the appurtenances thereo, to the several counties making the donation. It is a matter, I think seriously to be considered, whether it would not be better business management and as emphasizing the policy of the Board in its main reliance against smallpox by vaccination to cease to operate these hospitals and to permit the land to revert to the several counties who generously donated it in the past, when hospital management was thought to be the only means of controlling smallpox; not treating the disease, but controlling it. The buildings which were erected some years ago are now in much need of repairs and in one or two instances are not adequate for any large demand which might be made upon these institutions. They should be either rebuilt, repaired or pulled down, or the property allowed to lapse to its former owner. Moreover the location of these anti-vaccination homes for the indigently perverse cases of smallpox, are rapidly becoming closer and closer to

The isolation hospitals, of Dade, Duval and Escambia.

Abandoning the isolation hospitals.

settled portions of communities and contiguous to large populated centers as for instance: Jacksonville in Duval County and Miami in Dade County. The hospital sites butt onto suburbs of Jacksonville and Miami, which are rapidly being built up and it will not be very many years before the County Commissioners on complaint of citizens will demand their removal and the State Board of Health will be asked to either vacate or abandon the property. I think, therefore, it would be a wise proposition as a measure of economy as well as of common sense to think over the question whether any more money should be expended on these buildings, either in repair or in new structures.

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free hog cholera
serum.

The recommendations of the State Health Officer all meet with my approval. I especially wish to urge upon you the benefit to the State in economy and to the Board in efficiency and speedy management which would result from legislative permission to grant authority to the transportation companies operating in Florida to issue passes to the employees of the State Board of Health. The reason that the State Health Officer gives for requesting this permission is convincing and seems to me to be unanswerable. So, also do I approve of the recommendations in regard to amending the law relating to the free distribution of hog cholera serum. The protection of the swine industry of the State is a commercial proposition entirely and one of dollars and cents to the producer, and does not in any way affect the life or health of human beings. It is as much a commercial measure as the question of eradicating the citrus canker would be to the citrus fruit growers, and I do not think that the taxpayers of the State as a whole should be asked to donate \$20,000.00 to \$30,000.00 a year, which is one-third of the present income of the State Board of Health, to enhance the value of an industry that is so clearly a commercial and class consideration, to the manifest impairment of a fund designed for the protection of human life.

Recommendations
of State Health
Officer concerning
public schools of
the State, and
screening of all
places where food
is served.

Too much stress cannot be laid upon the recommendation of the State Health Officer that the forthcoming legislature should enact measures looking to a better sanitary supervision of the public schools of the State, especially in the rural districts. So too, do I advise that the present law which looks to the protection of the citizens from insect-borne diseases by

well screened kitchens, dining rooms, and "passageways leading thereto," be amended to include all other places in the State where food or drink is served the traveling public, and which may be contaminated by flies. The reasons given by the State Health Officer are so clearly expressed that it is unnecessary, I think, to enter into any extended argument on the same.

Most particularly I endorse the recommendation that the present vital statistics laws be remade into one comprehensive measure to insure the accurate collection and greatest usefulness of data on all the life history of the people of the State, and that these be properly and safely preserved as individual records of those most concerned, as well as for the benefit of the whole people to prove to the world that Florida is healthful; and to help guard against any lowering of that healthfulness.

Recommendations
concerning vital
statistics.

At the legislative session of 1911, a bill was passed directing the State Board of Health to erect and maintain a hospital for crippled indigent children of the State and equip the same. Twenty thousand dollars was provided for the purchase of grounds, erection of buildings and all necessary equipment, and ten thousand dollars a year for two years was mentioned as a sum necessary for maintenance. Doubtless you are familiar with the history of this measure. It was a pet project of Governor Gilchrist who then occupied the Executive Chair of the State, and a worthy impulse prompted, I have no doubt, the proposition. He had seen, as I suppose you have, many times when traveling about the State, a number of children who were deformed in limb either through inheritance or by accident, and who from reason of poverty or straitened financial circumstances of parents, had never been able to have their deformity corrected, and who, as age progressed and their natural supporters passed to the Beyond, would, unrelieved, inevitably become a charge upon charity of communities or of the Commonwealth. To have these children not become wards of the State, Governor Gilchrist proposed the measure, which was worthy of a great and generous Commonwealth. But the bill was "turned down" in the Senate because of the appropriation which it carried. At this juncture the Governor called to his assistance the State Health Officer and accepted a

Crippled indigent
children's hospital.

suggestion in the nature of a provision, "That until the number of indigent crippled children, citizens of the State of Florida, shall be sufficient in number to warrant the State Board of Health to erect and maintain an institution of this character and nature, that the State Board of Health is authorized to arrange with any sanitarium or hospital in Florida to care for and treat the indigent crippled and deformed children of the State and to pay for such treatment out of the funds of the State Board of Health not in excess of the amount appropriated by this Act." This Proviso met with favorable response from those in the legislature who had originally opposed the measure and the bill passed. Accordingly the State Health Officer has arranged with St. Luke's Hospital at Jacksonville for the care of the white children and with the Brewster hospital in the same city for the treatment of the colored children, who are afflicted or deformed. Dr. Raymond C. Turck of Jacksonville, a surgeon of orthopedic ability has heretofore taken charge of these cases—both white and colored—and has operated and relieved those whose condition was such that an operation would benefit at no charge to the State for his services. The Board has seen fit to give Dr. Turck each year an honorarium as a slight token of appreciation of his generous donation of time and professional ability. This is in no wise commensurate with the service given. Dr. Turck, until this year, has not asked for compensation, but in a recent letter to the Executive office he states that this work takes up a great deal of his time, and he asks to be put on the professional staff of the Executive Officer with adequate annual compensation. The increasing number of cases each year, seem now to warrant the Board in carrying out the terms of the Act by constructing and maintaining a special building for this purpose. Therefore I approve of the recommendation of the State Health Officer that a building be constructed, equipped and maintained in conformity with the provisions of the Act, for the care and relief of the indigent crippled children in the State, as soon as funds are available in the treasury of the Board for this purpose.

Recommending a
special building.

Receipts and
Expenditures.

While the aggregate of expenditures during the year, as itemized in the State Health Officer's statement, is apparently

large, yet it should not be forgotten that the demands on the Board's treasury imposed by legislative enactments from time to time, have likewise been heavy and exacting. Every voucher is audited three times before it is paid. The Auditor of the Board closely scrutinizes every item of the bill for authority, before preparing the voucher. It then is placed before the State Health Officer for his inspection and certification that the "charges are just, equitable and according to law." The voucher must then have my approval, and finally that of the Comptroller of the State, who if he thinks it is irregular or extravagant can "turn down" if he wishes any schedule of expenditures sent him. The order in which these audits are made is mentioned to show the exact course which every cent of the State's money pertaining to the State Board of Health funds, must take before it is spent. In this connection I wish to invite your attention to a marked inconsistency in the present Statutes in regard to the discharge of the State's obligations when incurred by the State Board of Health.

Under the law, the State Health Officer is made the disbursing officer of the Board, and he is placed under a ten-thousand-dollar bond for the faithful and honest performance of this duty, yet, he never has a cent of the State Board's funds put in his possession or under his control until the contracted debts are filed with the Comptroller. In other words every creditor of the State Board of Health is expected and required to receipt for the amount of his bill before any money is forthcoming, and is compelled to wait for a remittance to the State Health Officer from either the State Treasurer or from the Comptroller before he is paid. It occurs to me that the Legislature should either authorize a transfer of funds from the State Treasurer to the State Health Officer, for the use of the Board, on a regular, approved by the President of the State Board of Health, requisition, equal in amount to his bond, or else release the State Health Officer from the obligation of a bond. As the method now prevails, the State Health Officer in order to conduct the affairs of his office in payment of petty accounts, which business men usually class "petty cash," has to advance various sums each month to meet express charges, postage, drayage and such like small amounts, but which at

Method of paying
bills and handling
funds of the Board

the end of the month and until a reimbursement can be made, oftentimes amount to a respectable sum. For many years after the organization of the Board in 1889, the plan of transfer of sums not to exceed the amount of the State Health Officer's bond, on requisitions approved by the President of the Board, was followed, but under a subsequent administration was changed to the present method. At first, under the present ruling the amount authorized by the statute which the State Health Officer could make requisition for, was largely in excess of the amount monthly expended, and the excess was turned back into the general fund of the State Board of Health held by the State Treasurer. Even then there was no excess balance allowed for current expenses. At the present time this amount is not sufficient to pay the current monthly expenses of salaries alone, so I think that the Legislature should provide some relief, by amending the present law or enacting a new statute, in order that funds may always be available for emergency use when required.

There are many other interesting features of the State Health Officer's report, to which I might call your attention and discuss, but to do so in a letter of transmittal of this kind, would take up too much of your time, and I therefore ask that you give a careful reading and consideration to the entire report of the State Health Officer.

Very respectfully,

F. J. FEARNSIDE,
President State Board of Health.

EXECUTIVE DEPARTMENT

REPORT OF THE
STATE HEALTH OFFICER,
DR. JOSEPH Y. PORTER.

REPORT OF THE STATE HEALTH OFFICER

To the President of the State Board of Health of Florida:

Herewith is transmitted to you for your consideration and disposal the report for 1914 of the State Health Officer, who, according to precedent as Executive Officer and Secretary of the State Board of Health is expected to make a yearly report of the transactions of his office in order that the President of the Board after consultation with his colleagues may, according to the language of the Statutes:

Introduction.

“Make an annual report to the Governor of all expenditures, in a clear and concise statement, together with any special observations, and recommendations of facts that may be conducive to the health and sanitary condition of the State,
* * * * *

The report of the Executive Officer of the Board for this year except in one or two instances, almost exclusively deals with business matters and such questions as may affect administration, with the hope and expectation, that what is told might appeal to, and attract the thoughtful consideration of the Legislature at their biennial gathering in April. Discussions of scientific methods in preventive medicine, and the progress attained in this direction has been and will continue to be found from time to time in the monthly publication of the Board, the HEALTH NOTES, and in the weekly press service. Experience in writing reports which are mainly intended for the eye of the average Legislator or business man, has taught that attention is more likely to be gained by short and concise statements of what has been accomplished and what is recommended for future improvement, than a lengthy argument blended with instances and facts which, however interesting to a sanitist or a student inquiring into special subjects is apt to be considered dry reading by all others. Therefore the following statements from the different divisions of the Health Department comprise in a detailed manner what has happened in each during the current year. It is hoped that what has been attempted for the bettering of the health of the people of

Florida by the Executive Officer, may meet with the approval of the Board and that the recommendations for further improvement may be accepted and concurred in.

At the end of the year all of the 29 cities of the State of 2,000 and over, by the Census of 1910 are actively collecting records of births and deaths and nearly a third of the 50 odd cities between 500 and 2,000 have passed the ordinance recommended by this office and have started the work and over a dozen of the smaller municipalities have taken the same steps. Many of the other communities are interested and expecting to pass the necessary legislation soon, and some even of the counties desire to have rural as well as urban registration if some plan can be formulated to allow this to be done.

This community interest and desire to preserve the individual records of citizens and to show the true health conditions of each locality is greatly to be commended and is a long step towards the passage by the legislature of the Model Law now in force generally throughout the registration area of this country and which has in the past year been passed in Georgia and South Carolina.

Florida cannot afford to be outstripped by any other State in the South in this necessary index of her known but unproved healthfulness, for there is no other State in the Union which is more dependent upon an increasing influx of visitors and settlers nor is there any state which offers them so great opportunities. But the experience of the past year has shown the need of unifying and correlating the work of collections in the various communities, some of whose ordinances vary, and especially of the importance of a central control, rather than the control by the authorities in each municipality. Consequently it is strongly recommended that an appeal be made to the next legislature to pass the Model Law for the collection of Vital Statistics in the most suitable form to suit conditions in this State. Such a law would supplement local legislation now in force and become effective where interest was slight and ordinances unenforced and would eventually give all communities reliable records.

Explanation of
the method and
plan of the report.

In explanation of this arrangement of work and recital of events, it may be stated that the plan has been followed for the past two years because it was desired in the first place to show a due appreciation of the efforts of the sections, and secondly to have the several divisions tell in their own language what has been accomplished during the year, the successes met with as well as disappointments and difficulties incurred, and for each to suggest means for the future improvement of their institution. A careful reading of these reports as made to the Executive Officer cannot fail to give a very clear and comprehensive idea of the extent and nature of the labor performed by the different divisions, and which, when considered collectively, make up the work of the State Board of Health of Florida for the year 1914.

The general health
of the State.

The general health of the State for the past year has been exceedingly good; it might almost be said to have been "excellent" were it not that the word "excellent" might unintentionally mislead the reader, by suggesting that there had been an absolute absence of all ills which might or do affect mankind; a condition which can never be attained until the human race shall have reached a state of ideal physical perfection. It can be authoritatively stated, however, that preventable diseases have been less in frequency during 1914 than in previous years, except possibly in typhoid fever and that there has been an increasing development and interest in sanitary activities on the part of the people, as is likewise shown by a steadily decreasing morbidity. It is to be regretted that a broad statement of this character cannot be supported by figures and well worked out statistics, but as yet the Vital Statistics of Florida have not been so tabulated that a positiveness can be shown by tables and other collected data. A plan to procure this most necessary information is being attempted by the Executive Office, and has been in progress of acquiring for the past year. The movement, however, has been slow, not from a lack of honest trial on the part of the executive office to stimulate public opinion and individual interest, but because those who should be most concerned could not be made to see the great importance which well collected vital statistics would be to communities singly and to the whole state, collectively. The

The attempt to
procure vital
statistics for
Florida.

Statistician of the Board tells in his report how far he has gone in an effort to obtain information relative to mortality statistics and the expectation for final accomplishing of this most desired end. Unless tabulated vital statistics are accurate or within ninety per cent of accuracy, a limited information of this kind is worthless in studying the causes of sickness and for working out methods to lessen the occurrence of disease and lengthen the life of man. The value of vital statistics in health work and general sanitary management is of incalculable importance and those engaged in an effort to "keep people well" realize this more than the average citizen, to whom vital statistics present only an array of figures, and to the general run of readers figures are always mystifying and uninteresting. Educational measures along the line of improvement of the human race are usually gradual and cannot be hastened faster than the mental development of a people will accept and admit.

Value of accurate vital statistics.

The importance of a subject has to be gone over and over, and then some more, before facts are accepted and advice followed. This hesitance to agree to propositions which acknowledged teachers in certain callings are insisting upon comes not so much from a spirit of antagonism as from a mental lethargy and indifference—a "show me" disposition—in order to be convinced. Once convinced, the battle for health and health allies is won, especially when it can be shown that commercially the gain is one where dollars and cents counts equally or if not more with comfort and contentment. Unfortunately this unconcernedness about things pertaining to healthful living applies with equal force and argument to the general subject of personal hygiene and sanitation as it does to any particular branch thereof, and it is only by persistent and insistent pleading, coaxing and arguing and more particularly and especially through educational means in public teaching, it can attain to even a fair degree of acceptance of worked out truths and means and measures directed against preventable diseases. Health is the greatest asset commercially as well as for household happiness—domestically—that a community, state or nation can possess. The community which has the lowest death rate or in which sickness is so diminished that it is an almost negligible factor, is one that is prosperous in business,

Indifference to teachings on matters concerning health and sanitation.

progressive in civic development and happy in domestic life, for disease brings want and poverty and sickness entails suffering with all its attendant misery.

The efforts of the Executive Officer have been directed for past years in an educational campaign to the value of general and individual hygiene. Individual responsibility in health matters has been urged upon the people in press bulletins and in other writings from the Executive Office so often that the expression has become the "slogan of the Board." As the constant dropping of water will wear away flinty surfaces in time, so it is hoped that the constant and insistent urging which the Executive Officer is pressing upon the attention of the people of Florida in a general conception of personal responsibility in the manner of healthful living, may wear away that indifference and apathy which too often comes and is allowed to exist, in the absence of a general prevalence of some contagious disorder. The pendulum of alertness often swings then too far in the opposite direction, when fear takes the place of reason, and "a wanting to do too much of an unnecessary character" supersedes rational action.

If the Executive Officer of the Board can convince each citizen of the State that he or she should constitute himself or herself the sanitary guardian and watchful warden of his or her own household, to see that the tenets of hygiene and sanitary science are strictly followed in the care and management of all that comes under their supervision and control, the general tone of the State's health will not only be vastly improved, but will be more than improved, will soon be raised to the highest anticipation of possible perfection. Reference has been made to the means adopted to convey this information and the extent of exact knowledge of which, practical sanitarians possess on the subject. People must be taught that indifference to Nature's requirements and an open violation of the laws of health will assuredly meet with punishment. Uncleanly habits and immoral practices which jeopardize health—and all immorality tends to destruction of the natural vital force of resistance to disease—will undoubtedly pay the penalty of disregard, "even unto the third and fourth generation." This is Nature's law, and all natural laws, that is to

Individual
responsibility.

Wanting to do too
much in times of
epidemic.

say, those which pertain to human conduct in health or morals are inexorable and unrelenting in their operation. Experience has taught the Executive Officer that people learn quicker and remember longer that which is seen—that which is taught through the eye—than what is told them by speech. The mind seems to receive a more lasting impression by sight than by words, and the picture thrown on the screen whether instructive or merely amusing is remembered longer, than a verbal description would be, and while there has been an honest endeavor to interest the reading public of the State in sanitary subjects, by short terse articles on hygienic and allied topics through the HEALTH NOTES and in weekly press bulletins, and it is believed that the attempt at public instruction in this direction is appreciated, yet it is felt that there is still something lacking to round up or complete a system of instruction in sanitary schooling which will reach those who read indifferently and who usually skip over articles of advice about health, because they think that they are “too deep” for them to understand or are lacking in sensational interest. Perhaps this is true. If so, it then becomes the duty of those who are charged with educating the public along health lines to adopt other methods to reach an inattentive ear or a sluggish brain. Appreciating the difficulties which lie in the way of verbal or written instruction in educational measures of this nature, it has been thought that the cause can be better served by placing before the people plans, models and pictures illustrating the several methods by which health is conserved and improved. An attempt of this kind was tried out at the meeting of the American Public Health Association in December of last year in Jacksonville. The results justify the Executive Officer in enlarging the scope of informing the people in this direction by adding to the “exhibit” many suggestive hints to healthful living and to place the same “on the road” under the control and direction of one of his Assistants and Sociological Workers, that the people everywhere in the State may receive useful instruction in methods and ways which experience and study has taught to be of practical advantage in upbuilding the health of the home and community. Therefore commencing the early part of this month—February—

Teaching through
the eye rather than
by the ear.

The State Board of
Health's Exhibit.

the State Board of Health's "Educational Health Exhibit" will be a prominent feature in teaching the principles and fundamental doctrine of preventive medicine.

The Health Train
of The Louisiana
State Board of
Health.

The plan for community education in health matters adopted by Dr. Oscar Dowling the distinguished Health Officer of Louisiana, by which he instructs the different sections of his State through the agency of a health train equipped with all needful means to demonstrate the subjects taught and the lessons to be learned in personal and civic hygiene, is an ideal one for popular teaching of the public in this direction, and one which can be made effective through the State anywhere that a rail line is operated or a side track exists. His health train consists of three Pullman cars converted into exhibit rooms, two for the purpose of demonstration and one for living quarters for the attaches of the Doctor's office who are necessary to operate and assist him in his lectures. The Railroad Commission of Louisiana allows the roads in the State to haul this health train anywhere, and in fact the Interstate Commerce Commission of the United States has given permission as an educational measure, for any railroad in the United States to extend this courtesy if they wish to do so. Realizing the importance of health instruction it is not known that any railroad has ever refused Doctor Dowling's request for free transportation of his exhibits. If the Legislature of Florida would give its sanction to the State Board of Health to expend some of the health funds in an educational measure of this kind, or make a special appropriation for the purpose, it is felt that a very noticeable improvement in the health and personal hygiene in the rural districts of the State would soon be noticed.

Referring to the
Legislature of
Florida giving
sanction for the
State Board of
Health to expend
funds for health
train.

In the absence of exact and trustworthy information as regards the nature and extent of preventable diseases in the State during the past year, and which, if vital statistical data which could be depended upon, had been obtainable, which the Board should have had—recourse must be made to the reports of the different bacteriological laboratories to learn the number and character of the specimens and cultures which have been sent to them for examination and determination.

These reports furnish probably the best index of the number and varied grouping of diseases of a preventable nature which under existing conditions can be obtained. It must be remembered, however, that the accompanying tables only show approximately the cases and their number which have been reported for it is unlikely that medical attendants have sought from the laboratories information for all complex troubles coming under their care or that each fever patient or one affected with obscure throat symptoms has been reported to either the local representative of the State Board of Health or to the Executive Office.

Reports of preventable diseases obtained from the laboratories of the Board.

In his report the Senior Bacteriologist, commenting upon the prevalence of some of the "preventable diseases"—information concerning which he has gathered from the reports of the other laboratories—expresses the belief that in general there has been a lesser occurrence of these disorders in 1914 than in 1913. Typhoid fever was the only disease showing a larger number of specimens received and a higher percentage of positive examinations. This may be more apparent than real, because it is thought that physicians have made more use of the laboratories during the past year than in previous years, a fact which Dr. Hanson comments upon also. So it is just barely possible that the seeming increase of number of specimens and their positiveness in typhoid has been altogether due to a more frequent recourse to expert determination of the character of the sickness, which a laboratory examination gives, than to a greater degree of prevalence of this disorder. A dependable morbidity report each week from the physicians of the State—not of the names of the patients, but only the number of certain illnesses coming under their observation and treatment—would soon settle the question, which the Executive Officer has always contended for, that Florida has a low morbidity rate as well as a low mortality rate per thousand of population, but he has never been able to prove the contention by figures, for they were lacking.

Referring to the prevalence of preventable diseases as shown by laboratory reports.

Morbidity reports each week would settle the question of a low morbidity rate for Florida.

Some of the diseases classed under the heading of preventable disorders are oftentimes so obscure in symptoms as to be unrecognizable even to those who have had extended experience in treating them. For instance: Smallpox of late years

Preventable diseases being sometimes so mild as not to be recognized.

has been so exceedingly mild, causing so little constitutional disturbance, that the true nature of the contagion has been overlooked and not appreciated until perhaps a more violent disturbance has called particular attention to the viciousness of the eruption with more emphatic clinical manifestations. This reasoning is applicable to malaria and typhoid fever, except however, that a differentiation is more easily obtained between these two diseases if the microscope is used, or when, if that instrument of precision and diagnosis is not available, a prompt reference is made to one of the laboratories of the Board. It can be understood, therefore, that, with the element of doubtful diagnosis, and mistaken clinical interpretation, it is not an easy matter to be able to state the exact number of preventable diseases occurring in any one year, but it is believed that the morbidity rate as well as the mortality rate in Florida for 1914 has been greatly lowered over previous years. The statistics of mortality which the Board has been enabled to obtain from the cities having a population of 2,000 and over, where reports have been received fully within ninety per cent of accuracy, seem to fully attest the correctness of this belief, and would tend to the further feeling of certainty that all manner of sickness which most generally precedes mortality, has also been materially cut down in extent of prevalence.

Showing the
mortality rate for
1914.

From the four largest cities in the State having an aggregate population of 165,691, of which 101,186 are white and 64,505 colored, it is found that the mortality rate for 1914 was 17.5 per thousand of population; 14.5 for whites and 22.1 for colored, and excluding non-residents the rate was 15.6, for white residents 12.3, and for colored 20.6; all other than whites are included in the colored enumeration.

Why not accept
the measures
which science
advocates for
preventing
disease.

But with the knowledge which is so widespread, in regard to preventive measures against special diseases, the question can well be asked, "Why should people have smallpox, typhoid fever, malaria, or diphtheria? Why should not the measures which science in its multiform teaching asserts to be preventive, be accepted, and why should sickness with loss of working ability, which means loss in money, and all the attendant expenses, worry, anxiety and discomfort, be preferred to

health, vigor and mental activity and alertness, the possession of which allows the individuals to enjoy the pleasurable things of life? Can any sensible person give a reasonable objection to accepting and adopting propositions for keeping well and avoiding the sick bed? Yet the appalling statement is made by statistics that over half a million of human beings die each year from preventable disease; a sad commentary upon the boasted intelligence of the twentieth century. Is not sympathy wasted on a person who contracts smallpox or allows a member of his family to be infected? Rather should not such a perverse individual, after his physical punishment, be punished by law for being a common nuisance, a stigma on intelligence and a possible charge and a money imposition on the public which his more provident neighbor must help to bear? It would be a righteous and even-minded act for the law-making power of the State to declare that a failure to be protected against smallpox is a misdemeanor on the part of a citizen, punishable when so reported, and further because the disease is preventable, that every one having smallpox should be required to defray all expenses consequent upon such sickness. Where large numbers of persons are employed in construction work or in industrial plants, the employer should be made responsible for all charges and bills of attendance, isolation and maintenance of cases of smallpox occurring in their camps, plants of construction work, of railroad building, phosphate mining or other industrial institutions. It has been frequently said, but the remark is worth repeating, "A man would be considered either an idiot or a fool if he should refuse an insurance against fire for his home free of any cost to himself." How many men when a property consideration is concerned and a commercial aspect is placed upon an offer of this kind, would refuse? Yet daily the State is offering free insurance against smallpox by vaccination; an insurance not only against a sickness which is loathsome to the individual himself and repulsive to family and friends, but an insurance against disfigurement and perhaps death itself, and this offer is rejected. When it is stated that there were 583 cases of smallpox in the State of Florida in 1914 officially reported to the State Board of Health and that these cases of preventable disease cost the taxpayers

The failure to be protected against smallpox a misdemeanor.

Any one contracting smallpox to defray all the expenses.

Employers should be held responsible where a large number of men are employed.

of the State over \$10,000.00, is it a wonder that health authorities cease to have patience and forbearance when dealing with prejudiced individuals, who to maintain a foolish and unproven contention against vaccination will endanger not only their own lives but will sacrifice the lives of innocent and helpless beings, the children under their charge? These individuals could well be adjudged of unsound mind, for any human being so mentally defective as not to be amenable to reason in matters so vitally important as those affecting health are a menace to any community by reason of a mental deficiency and should be adjudged criminally responsible for his or her acts; as much so as for seditious talk, or inciting a riot. A burglar takes in money value what in time may be replaced. He is a criminal nevertheless. Those who oppose preventive measures against smallpox, typhoid fever and diphtheria are in the opinion of the writer, criminals of the same class as the midnight assassin or murderer. The only difference is one of degree and in favor of the assassin, for the victim may have an opportunity to defend his life, or escape, while in the other case, innocent children are made to pay the penalty of vicious perversity. Too strong language cannot be used in condemnation of those who not only actively oppose preventive measures for "keeping well" but likewise those who manifest an indifference to the subject and who while acknowledging the teachings of the State Board of Health as being correct, yet fail to practice what they believe and are convinced of. When citizens of the susceptible age to typhoid fever, between ten and fifty years can be protected for less than one dollar, and when statistics show that about only one person in one hundred thousand, when protected contracts typhoid fever, and when further statistics show that every case of typhoid fever is an expense to some one of about five hundred dollars, is it not surprising that aside from the "sick-bed" consideration, that prevention does not appeal more strongly to every one who is susceptible if only from purely a commercial standpoint? The same potent argument may be used for all other of the preventable disorders. Health means ability to work. Work means a capableness to accumulate and acquire a comfortable competency which means comfort and ease. It is only the stupid person who

Referring to the
prejudice of some
people against
vaccination.

Prevention
of disease.

fails to see the advantages which prevention against disease will bring to him. The Executive Officer trusts that the Board will pardon the show of strong feeling on this subject of "Prevention" against disease which has been indulged in, and with which so much space in discussing the health affairs of the State during the past year has been taken up. He feels however, that like strong remedies which sometimes are needed to cure, strong and forcible language is required to awaken the people to their own danger from a procrastinating indifference in which a vast number have fallen. They need to be aroused from a lethargy in which they are unconsciously slumbering. It is the inherent right of every human to protect his life. "Self preservation is the first law of Nature" reads with as equal significance and force today as it did when placed as a text at the top of a page of the old copy-writing book. There seems to be a crazed desire by a large number of men to carry a gun; for what? "To protect my life," is the answer. And the occasion to use such a means of defending life does not occur one one-thousandth times as often, as such an individual meets up with from possible infection of typhoid fever when traveling, or when visiting soft drink stands or eating in or at unscreened dining rooms and lunch counters. This man "with a gun" is willing to risk arrest, a fine, and perhaps imprisonment for disobeying a statute of the State, which will cost him money, besides deprive him of personal liberty, but hesitates and is willing to take "a chance" against typhoid fever although there is but little if any personal discomfort and he can obtain the protection for less than a dollar. Tons of literature have been written on this subject and tons of argument could still be printed. What the law-makers of Florida might seriously and advantageously consider is the commercial side of protection of the citizens of the State against smallpox involving loss of time, which likewise means loss in revenue, and more than all else imposing a burden in an equal manner on the taxpayers, who are called upon to sustain this expense because of a misguided and mistaken idea of "individual right" which is thought to be granted to the prejudiced and mulish, to do as they please, irrespective of the welfare of others.

The commercial side of protecting the citizens of Florida against smallpox.

The following table compares the occurrence of those preventable diseases which the Board has gained information of during the past year with those occurring in 1913. The comparison is favorable and shows a pleasing improvement.

Year	Small-pox	Typhoid Fever	Malaria	Tuberculosis	Diphtheria	Rabies. Pasteur Treatment
1913	1,166	566	506	777	739	107
1914	583,	960	277	746	707	89

It is impossible to make any precise statement of the money loss to the State which the occurrence of preventable sickness has occasioned during the past year. Information of this character would be interesting if it could be had, but because of a lack of data and reported cases no estimate can be made. Even an approximate estimate would be merely guess work for many mild cases have been unrecognized, and this is particularly true as regards smallpox, and oftentimes through indifference and carelessness the nature of fever cases is overlooked. However as it has been the principal duty of the Assistants to the State Health Office to ferret out, investigate and trace the source of infection in the preventable maladies to which the attention of the Executive Officer has been called, it would seem perfectly fair that all expenses attending such investigation should be charged against these disorders, and therefore with the expense of the laboratories, whose operations have mainly been directed to determining and ascertaining the nature of specimens for supposedly preventable sickness it can be stated within the limit of conservative estimate that the preventable disorders, which should never have occurred, have cost the Commonwealth of Florida in money loss alone in the neighborhood of \$75,000.00.

Much space has been taken up in discussing prevention of disease as of primary importance in health management. The subject of "Economic Value of Disease Prevention" was gone into in a late "Press Service Bulletin" and need not be repeated but it is believed that when a due appreciation is felt by the people of the importance of this subject, then will morbidity be decreased in the State and mortality likewise. The advance made of late years in the discovery of vaccine and serums by the use of which many illnesses can be avoided has enabled the medical man to cut short attacks of sickness and in many

Cost of preventable disease.

The use of serums and vaccines.

instances prevent their occurrence. Vaccines made from the dead cultures of the specific organisms of the individual suffering therefrom—known as autogenous vaccines—are now used in warding off attacks of numerous disorders, not fatal but annoying, that formerly were thought to have to run a specified course. The protection as well as cure afforded the child by early administration of diphtheria antitoxin with an immunization protection given to members of the same family, the prophylaxis that is the safeguarding of the individual when bitten by a mad dog, by the Pasteur serum; the anticipation of the action and preventing the same, of the tetanus germ, in wounds by the anti-tetanic serum; the vaccination against typhoid so well known; the inhibitive energy of quinine when contesting with the malarial parasite, are all sheltering arms which science has given to guard the human race against misery and sickness. The first duty of a State Health management is to advise and recommend to the people measures which will protect life, and secondly to urge the adoption of agencies which will improve health and suppress sickness. Therefore in discussing these subjects and presenting arguments for the same, the Executive Officer feels that he is but following a duty expected of him by the people of Florida.

The duties of a
State Health
management.

As was remarked at the commencement of this narrative, the happenings of the several divisions of State Health work are told in separate reports submitted by each to the Executive Officer of the Board and interesting accounts of the character of labor performed is given therein. Except in a few instances no comment need be made by the Executive Officer unless it be to commend the efforts of the chiefs of the different sections and to express his thanks for the diligence which they have exercised in the trusts committed to them. There are, however, one or two matters connected with the Veterinary Department of the Board and to laboratory and other management to which it is desired to call your special attention.

First, the free distribution of hog cholera serum to the farmers of the State, and the annoying features of free distribution, of the statute which was passed at the session of 1911. It is not thought that the Legislature when passing this bill contemplated what an enormous expense they were fastening

Free Distribution
of hog cholera
serum to the
farmers.

Regarding the intent of the Legislature concerning this Act.

upon the State nor what a drain upon the State Board of Health's financial resources it was imposing. It is further believed that the intention of the Legislature was—whether so expressed or not—that only a moderate sum should be expended by the State Board of Health under strict supervision of the Veterinarian of the Board to demonstrate the usefulness of the serum as a preventive of hog cholera and that if found successful, then the farmers to purchase the product, which would be a reasonable proposition, involving a commercial aspect. It is not believed that it was ever contemplated by the Legislature which enacted the law that one-third of the State Board of Health's income should be expended in caring for the health of a swine industry, the protection of which through preventive measures was to enrich the producer or benefit the exploiter.

Quoting the letter of the Attorney General.

The Attorney General of the State expresses this opinion in almost the same tone, as his letter shows:

Tallahassee, Fla., September 25, 1914.

MY DEAR SIR:—Yours of the 16th inst., has been received. I note your inquiry, as follows:

"The demand for free hog-cholera serum on the part of our farmers, has reached such proportions that this Board must seek some means of limiting the amount of serum which it will supply. At the present rate of distribution of serum it will require probably one-fourth of the income of this Board, this year. Will you be kind enough to express an opinion upon the point as to whether the State Board of Health can, under the present law, Chapter 6167, 1911, decide the amount it will supply to an applicant."

The Statute on the subject, Chapter 6167, Acts of 1911, is as follows:

"SECTION 1. The State Board of Health is hereby authorized and empowered to establish, maintain and operate a plant for the protection and distribution of hog cholera serum for the purpose of distribution to the farmers of this State upon application therefor.

"No cost shall be charged by the State Board of Health for the hog cholera serum so distributed."

Replying to your inquiry I will say that while the furnishing of hog cholera serum to the farmers of this State is a matter of great public importance, it is relatively of less importance than the protection and preservation of the health of the people of the State, and, therefore, I would say that the Legislature could hardly have intended that your Board should use so much of its annual income in furnishing such serum to the farmers as would interfere with the necessary work of the Board in looking after the public health.

The necessary conclusion is that while as much of the fund as possible should be used for the first named purpose, this should not be done to the disadvantage and neglect of the other, and my judgment is that the law should be thus interpreted.

Respectfully, (Signed) T. F. WEST,
Attorney-General.

Illinois is the only other State in the Union which gives away without cost hog cholera serum and in Illinois it is understood that only about twenty-five per cent of the requests for the preventive is supplied to those soliciting this gratuity. In consultation with the Veterinarian of the Board, Dr. Dawson, he tells the Executive Officer, and his language is quoted as nearly as can be remembered, that:

"As no Government can hope to furnish free serum ad libitum and as no government is attempting it, it does not appear wise for Florida to do so. Yet a government has a certain duty to perform in fostering its agricultural interests. It can profitably expend the taxpayer's money in demonstrating the value of preventing and eradicating those animal diseases that threaten the prosperity of the agricultural interests. In the case of hog cholera, it could, with perfect propriety furnish the farm demonstration agents now in the employ of the State, with certain amounts of serum and virus to prevent outbreaks of this disease. Florida is already a great hog raising state, and will become a greater hog producing State if it can be demonstrated that hogs can be protected from cholera. Not only will the number be materially increased, but more important still, will be the fact that the breed will be improved, because it costs little more to produce good breeds than it does poor ones. In this way all agriculture will be improved. What benefits the farmer benefits all, and the farmer should be given the kind of help that will help himself. The Veterinarian or his Assistants going to every farm and inoculating every hog as fast as they are born should not be thought of. It is a never-ending job, and also a thankless one. The plan that I would recommend is to have a man in every section, a man of themselves to treat the hogs of a community, much in the same way as certain men now do the castration work of a neighborhood. Let the farmers' clubs get together and make it a community affair. It would be very easy now to effect such organizations, as they already exist to a certain extent and only need being put on a sounder basis. The State bought \$21,160.78 worth of serum in 1914. Had not a limit been put on the free distribution, it is highly probable that the amount would have reached \$35,000.00."

Dr. Dawson's opinion of furnishing hog cholera serum to the farmers of the State free of charge.

Dr. Dawson thinks that \$10,000.00 would be all the State ought to expend another year in demonstrating the value of serum, and that the expenditure ought to stop almost entirely after the State has been thoroughly organized along the lines which he suggests.

Tick Eradication
and building of
dipping vats.

Second, as regards cattle tick eradication, provision for which was made by the Legislature of 1913, Dr. Dawson gives the information through his report that there are fifty dipping vats in the State. These, with one exception, that at Gainesville built for educational purposes, have been constructed by private enterprise. There has been comparatively little interest manifested in the subject during the year. Texas fever is usually a chronic disease and like many other important diseases even in the human being, creates little interest because it works its damages slowly, has been here for years and therefore creates little scare. The people who lose cattle from acute tick fever are, in many instances, settlers and are told by natives it is an acclimation fever and the cow did not have sufficient constitution to stand it. If our native cattle actually died of acute tick fever like our hogs do of cholera, we might expect the same interest to be shown in tick fever as in hog cholera.

Interest in
Escambia in tick
eradication.

What Dade County
is doing in tick
eradication.

Two counties have shown some interest in tick eradication during the year, Escambia and Dade counties. While it is not known what Escambia county has done along the line of actually getting ready to build vats and dip cattle, it is known that the county commissioners of Dade County have voted a sum of money sufficient, with the aid from the owners of the cattle and from private sources, to build all the necessary vats and hire inspectors to supervise the dipping, spraying and hand picking of cattle every two weeks regularly for five months, the time necessary to carry on this work of eradication in order to completely rid Dade County of the tick. Dade County is not a cattle county, that is, all its cattle are dairy animals. She has nothing to ship out and therefore should be the last county in the State that we should expect to eradicate ticks. However Dade County is expecting to become a cattle county and is, therefore, wise in fixing herself to begin the business with the great advantage of not having to raise cattle under conditions which the tick produces. The drainage

of the Everglades has opened up vast tracts of excellent pasture land, and now that citrus canker threatens the citrus industry, her people are looking to other profitable means of gaining a livelihood. This they can certainly find in the cattle business under tick-free conditions, as these drained lands grow pasture grass in profusion.

Dade County could, under tick-free conditions furnish all the dairy products needed in that part of South Florida, and even other less favored sections. There would be no need for canned milk and cream or for shipping milk and cream from counties two hundred miles away, as is now the case. All the dairymen are in the movement of clearing the county of ticks. It is a very small job as all the cattle in the county are located near Lemon City. A few are scattered here and there along the railroad, one or two at a place. These are to be hand picked free of ticks. At other places spraying will be resorted to. There are no range cattle.

When the actual work of eradication begins it will be necessary for the Board to quarantine all the ticky area of the United States. The same restrictions must be placed on ticky cattle for everywhere as is now placed on Florida cattle going out of the State. Those shipping cattle into Dade County from any ticky country must furnish certificates to the transportation company and to the State Board of Health that the animals have been properly dipped for destroying ticks. This quarantine will be as perpetual as the tick in the United States; cannot be lifted while there is ticky territory in the United States. When the present quarantine against Dade County is lifted by the Federal Government the people there will be permitted to ship to any part of the United States the beef cattle they will probably be at that time producing.

Quarantining
ticky countries.

Another advantage, the cattlemen from surrounding counties can dip their cattle and ship them into Dade County for grazing under tick-free conditions.

Dade County has asked for nothing from the State Board of Health up to the present time except information and moral support. They have raised the money and probably have enough to carry out the work. The State Board of Health will be asked to protect their interests by declaring and main-

taining a strict quarantine against other sections. All the cattle to enter the county will be transported by the East Coast Railroad and there is little doubt but that this company will cooperate with the Board in carrying out quarantine measures. One Company, the East Coast Cattle Company, does considerable business in the county shipping about three thousand head of beef cattle into the county per annum. This constitutes a considerable portion of the beef supply to the poorer people of the county, and should be taken into consideration. The Company should build their own vat and maintain the same, but it seems good theory that the State Board of Health should stand the expense of maintaining the quarantine against this company. It could hardly be expected that the Company would provide an inspector for doing the State's work, and Dr. Dawson recommends the appointment of a man at Fort Pierce to act as Live Stock Agent at that point. The salary of such a man should be about \$300.00 a year. His duties would be to supervise the dipping and write certificates for same. Possibly he might be taught to test the dip and see that it was of proper strength.

An Inspector
needed for Dade
County to
supervise the
dipping.

It is highly important that the people take more interest in the question. It does not seem fair to spend such large sums of money on hogs and practically nothing on cattle. It is true the people are not demanding the expenditure as in hog cholera, but that is because those engaged in the cholera campaign can more quickly produce results to satisfy the farmer, and justify their appointment as agent, by talking "hog cholera." It takes less than a year to produce a marketable hog, and three years to produce a marketable steer; therefore the hog is a money crop for the year. His feed is also more readily produced, and I think upon the whole a more intelligent class of people are in the hog business.

When Dade County is ready for actual work it will be necessary for the State Board of Health to ask for Federal cooperation.

Federal
authorities
raising quarantine
against Dade
County.

This means an inspector will be sent to see that the actual work is being done according to approved methods. The county will never be freed of the tick quarantine unless the Federal Government is invited to cooperate. This service will

cost the State nothing, and will not be given except upon the request of the official body in Florida having charge of animal diseases.

Besides hog cholera and tick eradication—Texas Fever—to which special attention is directed, there will be found much other interesting matter touched upon and discussed in the report of the Veterinarian of the Board. To those who are especially concerned in the care of live stock and the diseases of the lower animals, their protection against disease, and the economic management of the industry, the deductions of Dr. Dawson should be exceedingly entertaining and instructive.

A person is either sick or he is well. That is to say, if the functions of life are being properly and healthfully performed he is well, or if there is a condition existing which deviates from the normal by actual visible symptoms, such a person is sick. Now then if a certain organism, which is usually associated with a specific disease is found either in the dejections or secretions or on the mucous surface of an individual, and the individual does not show any clinical evidence of the disease which that organism, when pathogenic, is supposed to represent the type of, the question can be well asked, "Is such an individual well or sick?" If well, what particular damaging influence has the organism referred to, being inert, on the health of another person with whom the person harboring this class of bacteria unfortunately may come in contact? Reference is especially had to supposed "diphtheria carriers." The contention is not that there may not be organisms resembling in form and shape the diphtheria bacillus in the throats of school children, when examined indiscriminately, but whether, when cases of clinical diphtheria have not previously been found among children of a class room, are these children, who are otherwise clinically healthy, although showing the presence of the diphtheria bacillus in their throats, a source of actual danger to other children in the school?

Carriers of
disease.

The question is serious and deserves careful consideration whether organisms, which the laboratories state to be of a form and a character peculiarly denotive of a contagious disorder or infectious nature can remain inert, and take on a

Habits
detrimental to the
health of school
children.

virulent action only under conditions which lower the vitality of the individual and his natural resistance to disease inroads, or are always virulently pathogenic. For the practical value of such determination and conclusion affect in a very important degree the action of public health officials.' The habit which children unfortunately have of exchanging pencils and wetting the points, is not only an uncleanly one but a custom well calculated to transmit many diseases, not only in those who may be mildly clinically infected with diphtheria, but likewise with the streptococcus infections; an infection which causes severe constitutional disturbance. It can well be insisted upon, that it should be the duty of the teacher in charge of a class room to correct filthy habits of this kind as well as to prevent the interchange of fruit biting, gum swapping, or lunch eating, where or when one child bites a portion and allows his or her "chum" to do likewise. If "carrier cultures" could be tested out on normal and perfectly healthy humans, the results would be conclusive—one way or another, but who will permit this? Certainly no parent, even if the health authorities wished to try it out. The colon bacillus is constantly present in the intestinal tract of the human and belongs to that group of bacteria of which the typhoid bacillus is a kindred member. In morphology and under the microscope there is a striking resemblance one to the other. If, therefore, the colon bacillus can remain constantly in the intestinal canal of the human being, without harm or hazard to the individual harboring this form of bacteria, or to others whom he comes in contact with, why is it not possible that bacteria of similar shape—unless maintained to be constantly virulent—lie dormant until a lowered vital resistance occurs, which then makes it a virulent organism?

Bacteriological
laboratories.

The bacteriological laboratories of the Board, of which there are six in number including the central laboratory at Jacksonville, have done most efficient service during the past year. From the reports of these useful aids to the people in determining a speedy nature of sickness much valuable information is gained.

The number of specimens examined have been 34,780 and it is exceedingly interesting to learn the character of the

examinations made. The tables which will be found elsewhere give information that serves as an index as has been heretofore referred to, of the health status of the State and the prevalence of certain disorders in the several sections of the commonwealth. It will be noticed from a study of these tables that other public health work, than what is usually followed in laboratory routine, has occupied a large portion of the time of these institutions. Bacteriological examination of drinking water used in railroad coaches and in other methods of public transportation of the people, which must be certified to semi-annually by the Executive Officer of the Board and which is required by the United States Public Health Service, take up much of the time of the laboratories. Mention is made of this fact to direct attention to the extent and character of the work done.

Scope of
Laboratory work

The Senior Bacteriologist, Dr. Hanson, discusses in the report of the Central Laboratory, of which he is the head, the subject of disease carriers. That is to say the existence of certain pathogenic organisms in otherwise healthy persons, who manifest no clinical evidence of the disease for which the organism in question is supposed to be the type and equivalent. The Executive Officer may be expressing very heterodox opinions and may earn the reputation of being extremely radical in his views, but he cannot bring himself to believe that all instances of so-called "carrier infections" when speaking of outbreaks of certain of the infectious disorders, are really and actually due to the presence of certain bacteria, which classed as harmful may take on under certain unknown conditions, a virulent action, are nevertheless unsupported epidemiologically by clinical symptoms. While results obtained from experiments of the transmissibility of disease of this nature on the lower animals are fairly conclusive, yet, there will always exist an element of doubt as to whether the same germ impress is felt by them as would be the case in human inoculation. Here objections are reasonable for it was not known until human test cases were had in yellow fever transmission, that the virus of yellow fever was only transmitted through a special species of mosquitoes and that it was non-filterable. In a series of

Diphtheria examinations for determining the prevalence of diphtheria in DeFuniak.

examinations lately made in the Central Laboratory of the State Board of Health, in over five hundred throat swabs sent in from DeFuniak, less than two per cent showed the presence of the diphtheria bacillus, but a great many did show a streptococcus infection. There had been during the year quite a sprinkling of cases of sore throat at DeFuniak which had been diagnosed as diphtheria, and on request of one of the prominent physicians, a large number of outfits were supplied because he thought that in no other way could it be determined whether the continuance of the throat trouble was due to "carrier cases" or not. The information is yet lacking of how many of the specimens submitted for examination the symptoms bore out the probable clinical diagnosis of diphtheria, and whether all possible sources of infection transmission have been included in the swabs collected. It is hoped that this information may be had before this report goes to press or to the Governor, because it may have a very decided bearing upon public health management of this disease, and in connection with public health education and a supervision of the health of the child in the public schools. There are many good reasons for believing that in the prevalence—limited or extended—of typhoid fever, if it were possible to trace the source of the infection it would be found that immediate or indirect "contact" played a more important factor in distributing the contagion than did "carriers," for in the study of the histories of several of the outbreaks of typhoid fever attributable to carrier cases the analysis made by rational reasoning show many vulnerable points not in keeping with what is known as well established facts in the etiology of this disease. More experience and investigation is yet necessary both in the bacteriological laboratory and by the etiological clinician, before it can be said without question that the "carrier" per se, without clinical support is such an important factor in transmitting disease organisms.

Tuberculosis work and handling by the Visiting Nurse.

At the March meeting of the Board in Key West, three sociological workers for special tuberculosis work were authorized. The State Health Officer desired to have at least 15 of these "Tuberculosis Instructors," but the Board thought differently, and with these three the work was started. The "Visiting Nurse" for the Western District was appointed in

April. The first month of her appointment she remained in Pensacola, her resident town, the whole month visiting patients in that vicinity.

In October the other two were appointed and started a survey of their territories, known as the Southern and Central Districts. These districts comprise the following counties with population for each district: Western District, Counties 17. Bay, Calhoun, Escambia, Franklin, Gadsden, Holmes, Jackson, Jefferson, LaFayette, Leon, Liberty, Madison, Santa Rosa, Taylor, Wakulla, Walton, Washington. Population (1910) 238,902. Central District: Counties, 24. Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Duval, Hamilton, Hernando, Lake, Levy, Marion, Nassau, Orange, Osceola, Pasco, Putnam, St. John, St. Lucie, Seminole, Sumter, Suwannee, Volusia. Population, (1910) 274,869. (Jacksonville is not included in this district as they have a city nurse.) Southern District, Counties, 9. Dade, DeSoto, Hillsborough, Lee, Manatee, Monroe, Palm Beach, Pinellas, Polk. Population 171,639.

Divisions of the
State into Districts
for work of
Visiting Nurses.

When it is considered that Florida has a population of nearly a million, with an area of 54,861 square miles, it is hardly fair to the work of the nurses, and the importance attached to the same to attempt a report at this time. However there were two hundred and seventy-one patients visited to whom instructions were given. Of this number 207 were white and 64 colored.

Many times owing to poor railroad facilities in some communities, time is lost in getting about or a too hurried visit to patients and physicians is unavoidably made. These workers even against such odds have made good headway and show what could be accomplished with a full working corps of intelligent women. Many hardships are encountered, such as belated train schedules, poorly prepared food in out of the way places, and uncomfortable sleeping conveniences, but they always find the patient reported, even though it takes a long walk, or drive or row boat trip combined, to reach the destination.

It can easily be seen that with such large territories to cover, these workers cannot keep in the close touch with patients that is necessary to make them earnest and helpful

themselves. Then too, the nurse feels that she cannot devote as much time to one community as is sometimes thought to be necessary, in order to help the family over the first few days of reorganized methods of living. Then too, a great many of the patients will be dead before she can return, which will tend to make the family lose confidence in the Home Treatment plan, as there are from day to day little things that the family feel that it can talk over with a nurse, rather than their physician who is always to them a busy man. Unfortunately, many times they have lost faith in the doctor because of his seeming indifference to their particular case.

Plans to enlarge the scope of the work and obtain better results.

To perfect the plan of assisting the consumptives of the State in better hygienic living, with the hope of improvement and still further expectation of arresting the disease, the Executive Officer should be permitted to enlist not less than fifteen supervisors in this health work, so that it may be possible to get a more accurate history of the sick when discovered and thus keep them under, it might be said, constant observation.

Sick people forget very easily even though they are inclined to accept advice, and too often cases of consumption occur in families where the bread problem is an all-absorbing one. There is little time left from the multitudinous duties of the mother—for the burden falls on her—to sit down and consider seriously advice which the nurse left on her last visit. Therefore, it can be understood how necessary it is that these unfortunates should be seen frequently in order that their hope may be stimulated and they may observe and fulfill directions for their own care and the protection of their loved ones.

This corps of sociological workers would mean an annual expenditure of \$18,000.00 with added expense for traveling, making an appropriation in all of about \$30,000.00 for this one purpose—the “Prevention of Tuberculosis”—which is not an unreasonable sum for the State to expend in an effort to lessen the number of cases as well as to hold out hope to those already sick, of having their disease arrested.

This plan for an anti-tuberculosis campaign is a more feasible, rational and practical way of dealing with the disease than by institutional treatment. In the latter only comparatively

few can be reached, and a great majority of whom there is no accurate information, continue to sow germs of the disease, which multiply cases, and thereby lessen the working capacity of this state. Labor means production. Production a money increase, therefore, everything that tends to decrease the working force of the citizen, likewise occasions a money loss.

In an address delivered to the Federation of Women's Clubs of Florida at Lakeland, last December the State Health Officer went quite minutely into the value and benefit of the "home treatment" and by sociological workers as compared with an institutional care of the unfortunates.

It will be noticed in the reports of the Assistants to the State Health Officer, that reference is frequently made to surface closets defective in construction, as being the propagating cause of hookworm and of typhoid fever through fly infection. It is a well established fact that in this State these two diseases owe their existence, and it can well be said continuance to the storehouses of human filth, which are faultily built and controlled. Perhaps it will not be putting the matter too strongly, when it is said that there is a total absence of those conveniences, so needful to health, in many rural homes.

Defectively
constructed
surface closets.

An official high in the educational interests of the State is responsible for the statement, when inquiry was made, that over fifty per cent of the rural schools of the State are unprovided with surface closets of any kind. Is it any wonder therefore that notwithstanding the vigorous campaign which the State Board of Health carried on against hookworm, for several years, that the effort has resulted in so little permanent benefit, when conditions are allowed to continue—soil pollution—which is known to harbor the larvae which infect the feet of barefoot children, and thus keep up the vicious cycle of hookworm contamination? Is it not about time that the Legislature should take cognizance of such neglect on the part of the County School authorities and if there is no provision of law by which surface toilets can be constructed and thoroughly screened then to enact such a law and to make it an imperative duty of every principal of school, rural or civic, to daily exercise a supervision over these necessities for health, to see that the interior of the buildings are kept clean and to punish

Rural schools
unprovided with
surface closets.

rigorously any defilement? The school trustees or supervisors should be required to have the excreta from these buildings disposed of in a sanitary manner and the grounds in and about the buildings properly purified. If it is practicable, and there is no sensible reason why it should not be a wise suggestion, a legislative enactment might require that all privies or surface closets when built without sewered areas, in any portion of the State should be screened and made fly proof, for it is known that typhoid fever and other of the intestinal disorders are insect-borne and that the fly is mainly responsible for the propagation and spread of these diseases in Florida. The drinking waters of this State are pure; that is to say, are free from intestinal contamination and can be safely used. It has only occurred twice in the history of the Board that typhoid fever has been traced to water used for drinking. When so detected the use was forbidden and the prevalence quickly subsided. Therefore, the Executive Officer is convinced in the opinion that if the possible infection of the fly can be prevented, that there would be a marked lessening of intestinal sickness in the rural districts of the State and a rapid elimination of typhoid fever. This wished for health betterment can be hastened by compelling construction of surface privies or closets in such a manner that flies cannot reach the wastes of the body, and carry possible infection to food, for it is only through the digestive tract that the poison multiplies and sickens.

Drinking water
of the State.

Flies and Typhoid.

During the year 6,000 letters have been received and answered from the Executive Office in addition to which about an equal number were answered by postals, besides much other correspondence has been attended to, which did not call for replies. In addition to this large mass of letter writing, 111,760 pieces of literature on sanitary subjects have been distributed and mailed to those asking for the same. And not only to persons asking for information of this kind has it been the pleasure of the office to supply, but to every one who it might be thought was at all interested in health matters, have pamphlets been sent, on sanitary topics. The compilation of articles for the HEALTH NOTES each month has taken up much time of the Executive Office, and no little effort to prepare and make

interestingly readable and which together with the weekly issue of the "press bulletin" demanded care in arranging. The main effort however, of the Executive Office in an educational way has been directed to imparting information to those who seemed willing to be instructed or advised in sanitary or hygienic matters, and therefore no opportunity has been lost to assist any and every one seeking to be taught and set straight on disputed questions relating to ways and manner of healthful living. No inquiry has ever been considered too insignificant to have prompt attention and a cheerful acknowledgment. Nor has it been thought to be detracting from the dignity of the office to say "I don't know" when only theorizing could offer an answer, and actual facts were not known. The Executive Office has never approved of advising the people along sanitary lines that well digested and proven out facts could not sustain. Practical sanitation, which intelligent people can understand and appreciate the value of, inspires confidence: that which is based mainly on theory, is rejected as doubtful, as being unsafe to accept.

Office routine
and matters.

With increased responsibilities requiring expenditures, placed upon the State Board of Health by each successive legislature and additional provisions of work and construction enacted by the Board itself at regular and called meetings, the outlay of money from the Board's legitimate income, the half mill tax on the assessable property of the State doubtless appears to the average citizen to be large, but when it is taken into consideration that the Florida State Board of Health has a versatile field of operation not usually filled by other State Boards of Health, and embraces within its scope of labors the care of domestic animals as well as the human, and that the legislatures have been particularly generous in the treatment of the former, the maintenance of which charity to the commercial interests of the State is all charged against the State Board of Health fund, the Executive Officer does not think that he can be justly accused of extravagance in spending money for measures which are authorized by statute and by the Board, because results have justified the cost and it is results that the people of Florida are looking for; results which inspire confidence in the ability of the State Board of Health to cope

Receipts and
expenditures.

with problems of health management—within the State and a manifest capability to prevent by practical means and common sense methods disease agencies from gaining admittance, without at the same time disrupting business and causing needless alarm and financial loss.

The accompanying table will show in minute detail the different items of disbursement and for the purposes expended. The State Health Officer has heard that it has been asked where has such a large sum of money gone, and for what spent? as if there was a wastefulness of the same. Those persons need not, had they taken the trouble to read the annual reports of the Board, have expressed such surprise because each year for twenty-six years a table of this expenditure has been prepared and submitted at each annual meeting of the Board and forwarded to the Governor of the State. Not only so made public, but the reports have been printed and freely distributed for the asking. Each elected member of the Legislature, Cabinet Officers and prominent organizations of the State have been supplied with a copy as well as those citizens who the Executive Officer has thought to be especially interested in State sanitation and preventive medicine. If those charged with the conduction of public affairs of the State will not intelligently acquaint themselves with the movements of the different departments of the State Government, by making the inquiry, or by investigation, the failure to be informed, should not be charged against the Executive Officers of the several boards.

The Expenditures
in Detail.

Per diem and mileage, members of the Board, February, March and July meetings.....	\$	602.40	
Office equipment, traveling expenses and remuneration account special details members of the Board		245.11	\$ 847.51
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Salaries and traveling expenses, Executive Department:			
Salary State Health Officer.....	\$	3,000.00	
Traveling expenses, State Health Officer.....		1,919.58	\$ 4,919.58
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Salaries of eight Assistants to the State Health Officer, and one Assistant resigned.....	\$	17,666.32	
Traveling expenses, Assistants to the State Health Officer		4,705.19	\$ 22,371.51
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STATE BOARD OF HEALTH OF FLORIDA

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Salaries, two County Agents.....	\$ 1,200.00	\$ 1,200.00
Salaries of Sanitary Patrolmen, Jacksonville, Tampa, Pensacola and Key West.....	\$ 4,800.00	
Miscellaneous expenses, sanitary patrol service..	192.30	\$ 4,992.30
Salaries, three Tuberculosis District Nurses.....	\$ 1,375.00	
Travel expenses, Tuberculosis District Nurses...	603.05	\$ 1,978.05
Salaries Veterinarian of the State Board of Health, one Assistant and one Assistant re- signed	\$ 4,099.92	
Travel expenses, Veterinary Division.....	1,560.57	\$ 5,660.49
Maintenance of Executive Office, Jacksonville:		
Clerical Assistance: salaries of three clerks and office boy, and special clerical service.....	\$ 4,439.96	
Vital Statistics: salary and traveling expenses of Vital Statistician, office expenses and pay- ments for reports.....	\$ 2,442.39	
General office expenses, including postage, ex- pressage and office fixtures.....	1,974.00	
Printing, stationery, etc.....	4,145.72	
Telephone and telegraph tolls.....	680.46	
Insurance and miscellaneous items.....	803.74	\$ 14,486.27
Library: equipment and maintenance.....		\$ 1,039.95
Administration Building: maintenance and fixtures		1,066.38
Grounds, Administration Building: maintenance and laying of driveways.....		920.03
County Isolation Hospitals, Equipment and Main- tenance:		
Dade County.....	\$ 180.00	
Duval County.....	2,460.72	
Escambia County.....	852.23	
Hillsborough County.....	1,006.55	\$ 4,499.50
Smallpox expense, unclassified.....		1,849.38
Vaccine (smallpox).....		845.00
Diphtheria and tetanus antitoxin, and typhoid vac- cine for the indigent.....		644.90
Pasteur treatment for the indigent.....		1,480.90
Expense incident to uncinariasis, unclassified.....		593.16
Reimbursement for glandered animals.....		1,700.00
Hog cholera serum.....		21,160.78
Crippled Children: hospital and incidental expense..		5,172.47
Sanitary engineering.....		100.00
Exhibits and publicity.....		1,159.41
Bacteriological Laboratories:		
Jacksonville: Salaries, Senior Bacteriologist, two assistants, stenographer and two orderlies.....	\$ 7,897.92	
Equipment and maintenance.....	2,534.65	
Construction of animal house.....	2,284.00	\$ 12,716.57
Tampa: Salaries two bacteriologists, steno- grapher and janitor.....	\$ 4,171.60	
Equipment and maintenance.....	1,402.33	\$ 5,573.93

Pensacola: Salaries of one bacteriologist and office boy.....	\$ 2,229.92	
Equipment and maintenance.....	864.49	
Laboratory building.....	6,145.56	\$ 9,239.97
Miami: Salary one bacteriologist.....	\$ 333.32	
Equipment and maintenance.....	1,386.78	\$ 1,720.10
Tallahassee: Salary one bacteriologist.....	\$ 166.66	
Equipment and maintenance.....	395.91	\$ 562.57
Key West: Equipment and maintenance.....	\$ 511.32	\$ 511.32
Total expenditures, 1914.....		\$129,012.03

Receipts.	Regular Requisition	Special Requisition	Returned to Comptroller	Total
January	\$ 3,882.64	\$ 3,271.83	\$.....	\$ 7,154.47
February	3,904.64	4,060.86		
		3,634.59	.....	11,600.09
March	3,903.64	869.65		
		3,891.34	.05	8,664.58
April	4,436.60	5,667.52		
		1,932.12	.....	12,036.24
May	4,682.60	4,706.60	8.11	9,381.09
June	4,611.60	750.00		
		2,946.13	.....	8,307.73
June and July....	.....	4,030.32	.....	4,030.32
July	4,525.10	4,076.33	.....	8,601.43
August	4,640.10	5,451.98	8.60	10,083.48
September	4,644.11	750.00		
		4,323.68		
		1,370.74	21.06	11,067.47
October	4,894.73	6,375.62	.....	11,270.35
November	4,689.10	4,234.41		
		3,658.80	.....	12,582.31
December	4,781.76	750.00		
		79.31		
		3,349.22		
		2,788.97		
		2,483.21	.....	14,232.47
Totals.....	\$53,596.62	\$75,453.23	\$ 37.82	\$129,012.03
Total Receipts, 1914.....				\$129,049.85
Returned to Comptroller, 1914.....				37.82
Total Amount Expended, 1914.....				\$129,012.03

In view of the fact that the railroad companies operating in the State have all expressed a willingness, and in one or two instances a desire to extend to the employees of the State Board of Health, the courtesy of free transportation over their lines, it does not seem improper or inconsistent with either the morals or rectitude of the State that such offer should not

be accepted, particularly as a saving to the Board's treasury would be effected each year of many thousand dollars. Accordingly at the last session of the Legislature a bill was prepared and introduced whereby the employees of the Board, when traveling on the Board's business, would be permitted to accept free transportation from the rail and steamboat companies in the State, and the companies also be granted permission to give the same. As there cannot be any virtuous obliquity in this enactment, especially as sheriffs of the State who, by law, are entitled to and do receive mileage fees when executing the mandates of a court, are given passes, and further as State Health Officials are performing a quasi-philanthropic duty in an endeavor to promote and protect the health of Florida's citizens, it does not seem that there should be any opposition on the part of the Legislature to grant this concession. While the State Board of Health cannot be said to be a purely eleemosynary institution—and these are exempted from the restrictions against passes—yet, there is an element of charitable work in the efforts put forth by the Board, which without any great stretching of word construction could bring the employees of the Board within the scope of the privilege and not violate the spirit of the law. The "pass privilege" to employees of State Board of Health is given in a great many States of the Union, and in some no pass except the showing of a badge is required when a representative of the Board is traveling on public and official duty connected with the execution of health statutes or to carry out the purposes of health management. The bill prepared and introduced for the purpose of obtaining the legislative consent to the measure requested by the State Board of Health, while meeting, it is understood, with the approval of the majority of the legislative body individually, yet failed to pass, because, it was disapproved of by the Railroad Commission. On what grounds this disapproval was made is not apparent, nor is it known that any was given.

Free transportation of State Board of Health employees when travelling on health missions in the State.

It is not believed that the purport of economy and efficiency to the State which a measure of this kind would fulfill, could have been thoroughly understood. Precedents have been established in this regard in other States, and the advantage in quick action and frequent investigations, without having to

hesitate and weigh the cost of travel should certainly appeal to the thoughtful citizen and to all who are deeply concerned in the conservation of health with the greatest measure of economy. If the Board will interest itself in bringing to the attention of the Governor and lawmakers a provident provision of this kind, it is believed by the Executive Officer that any untoward hostility would be overcome, especially when a money saving, which the transportation companies are willing to donate, could be plainly shown. The members of the State Board of Health, who under the Statute have their traveling expenses provided for by a specified mileage, are under the Constitution, as Officers of the State, appointed by the Governor, forbidden to accept "free transportation" but the Executive Officer of the Board and his Assistants together with all others connected with the executive office, are employees of the Board and if the Legislature will permit cannot be affected by any Constitutional restriction.

Crippled
Children.

This report would not be complete if due mention was not made of the most excellent work accomplished during the year under the provisions of the "Crippled Children" Act, a measure which was passed by the Legislature of 1911. The account of operations performed and results obtained is found elsewhere in the very admirable report of Dr. Raymond C. Turck, and is very interesting and instructive reading.

Since the passage of the bill authorizing this charity by the State Board of Health, Dr. Turck has had full charge of the surgical management of these cases in the correction of limb deformities of indigent children of the State, who alone under the conditions of law are the beneficiaries of the State's charity in this respect.

Work
accomplished for
the crippled
indigent children.

The thanks of the Board should be extended to Dr. Turck in the warmest manner of commendation, for the valuable and skillful service that he has given these helpless little ones, who, without his expert professional knowledge so generously given, would still be helpless and pitiable. The assistance which the Statute permits to be given to children who are deformed in limb or limbs, or who through sickness, accident or at birth, are unfortunately deprived of the use of any of the extremities of the body to an extent which would prevent them from

earning a living later on in life, is a praiseworthy effort on the part of the State to provide an opportunity to transform a helpless cripple into a useful self-sustaining citizen. The State Board of Health appreciates the confidence shown by the Legislature when it confided this care of suffering humanity to its supervision. As the number of crippled children applying for relief, is increasing each year, the Board should consider the necessity for providing for their care in a building owned and operated by the State Board of Health in accordance with the terms of the Act. The provision to board these indigent children in hospitals or other institutions was to continue only until the number requiring aid and help increased to such proportion as would warrant the Board in erecting a hospital of its own for the purpose.

Building or ward
now necessary to
care for crippled
children.

Dr. Turck believes that this period has been reached and that the Board should cast about for a fit location on which to put up a suitable building, properly equipped for all purposes which a corrective treatment of every manner of deformity might demand. Possibly it is thought that the St. Luke's Hospital Association might be induced to donate sufficient space on its grounds to erect a ward to be operated by the State Board of Health in connection with the management of St. Luke's Hosiptal and the opinion has been advanced that such construction along modern lines for a ward especially designed for the correction of deformities could be completed for twenty-five thousand dollars. The "up-keep" and maintenance of such a ward would depend largely on the number of children admitted, but hardly appreciably more than is now paid for the sustenance of the patients at St. Luke's and Brewster Hospitals. This is a matter which deserves the earnest consideration of the Board, and its importance should not be overlooked.

From all that has been written and discussed in these pages and the arguments submitted, what recommendations are further necessary or thought to be, to increase the healthfulness of the people of Florida as a State, and to help individual citizens thereof in keeping well and avoiding causes of sickness it is imagined can be easily anticipated. Omitting for the moment the third person in which style of writing reports

The State Health Officer assumes all responsibility for statements made in this report.

of this kind from the Executive Office have heretofore been made, and which is usually adopted, the State Health Officer wishes to assume entire responsibility in opinions expressed and is altogether answerable for any dogmas which may be considered dissenting and in opposition to customary or accepted views of bacteriologists. This explanation is made that the Board may not be embarrassed if entertaining different views and opinions from those expressed by the State Health Officer, and which might mislead the public if the Board held contrariwise ideas. To further improve such conditions pertaining to health, which will lessen sickness of all kinds, lower the death rate of the State, and incite the people to a greater activity in suppressing preventable diseases, the State Health Officer submits the following recommendations:

Recommendations

Screening food against flies.

First. That the intention of the present State statute which proposes to guard the health of the traveling public against typhoid fever and allied disorders, by well screened kitchens, dining rooms, and "hallways leading thereto" shall have its protective powers enlarged by statute so that all meat shops, butcher shops and markets, grocery stores, where food is sold for consumption in the raw state, fruit stands, railroad lunch counters, and other places where food is served to wayfarers and itinerants, and all dining and buffet cars operated in the State, shall be well screened by wire netting, with mesh sufficiently close as not to admit flies. Not only shall these places of food disposal be screened but it should be made the duty of owner, occupant or operator to see that there are no flies in the dining rooms, kitchens, dining or buffet cars, or other mentioned places.

Surface closets should be fly-proof.

Second. That by legislative enactment, all surface closets and privies used for the deposit of human excreta shall be fly proof in construction, and in conformity with plans recommended and approved of by the State Board of Health. This plan of building is easily erected and inexpensive to construct.

Third. That also by legislative enactment, all school boards in this State shall be compelled to have every school building provided with adequate facilities for Nature's Conveniences by either water carriage or surface closets, separate for sexes, and in rural districts where sewerage systems do

not exist, the surface closets to be of fly-proof construction. That the trustees or supervisors of a school shall be held strictly accountable for the cleanliness and good morals pertaining to such buildings. The condition of these buildings and the care exercised in keeping them in proper sanitary state should be a matter of investigation and presentment by the Grand Jury of a County at each term of a circuit court.

Fourth. That the Legislature be urged to vitalize the statute of 1899, establishing the Bureau of Vital Statistics under the supervision of the State Health Officer as Registrar of said Bureau, by amendments providing for the practical provisions found essential by other states; the statute to provide for urban registration at first and later for complete statewide registration, rural as well as urban, when and as the time is deemed ripe. And that all records and data relating to the life and health of the people of the State now in possession of the Board and which can hereafter be collected, be properly and safely housed, kept, indexed and published by said Bureau, so as to be of the utmost use and value.

Recommendations
concerning Vital
Statistics.

Also that all possible data of Morbidity, the statistics of sickness, the most important of all vital statistics, be gathered and made useful by the said Bureau, and that the above amending legislation make special provision for the Board to have power to make rules and regulations of full force and effect as law for the collection of such records.

Fifth. That the Legislature be requested and earnestly petitioned to permit by enactment the transportation companies operating in Florida to give passes to the employees of the State Board of Health when traveling on official business of the health department and in the interest of health conservation. The argument for such request, is economy to the State and a more prompt and efficient service to the people.

Recommending
free transportation
be allowed
employees of the
Board on State
business.

Sixth. That the existing statute requiring the State Board of Health to furnish hog cholera serum free to the agricultural interests of the State be so amended as to direct that this preventive of disease to the swine of the State shall only be given free for demonstration purposes; the free distribution to be withdrawn when information in the use of the serum has been gained by competent instructions. The argument for this

Withdrawing free
hog cholera serum.

recommendation is that to issue hog cholera serum as a gratuity to any one for the asking would very soon bankrupt the State Board of Health's treasury, and it is not supposable that the Legislature when passing this measure ever contemplated embarrassing the operation of the State Board of Health in its special charge of looking after the health of the people, by imposing an obligation of so evidently an agricultural commercial proposition, in detracting so much of the Board's annual income from the really legitimate purpose called for by the Constitution of the State, in Article Fifteen of that Instrument.

Visiting Nurses
for the State
doing tuberculosis
work.

Seventh. That legislative sanction shall be sought towards improving the pulmonary tuberculosis of the State, of whom it is variously estimated there are about fifteen to twenty thousand, by the home treatment of the disease under the care and management of the State Board of Health, through a corps of intelligent and trained sociological workers, who distributed throughout the State in designated districts may frequently visit the sick of this disease and give needful information respecting individual treatment, by hygienic and sanitary rules. This advice to be extended to the family that it too may know how to avoid contracting the disease, and may make surroundings of the sufferer more comfortable and safer to other members. The argument and reasons for this recommendation are set forth in detail elsewhere in the text of this report, and;

Hospital
for Crippled
Children.

Eighth. That as soon as the funds of the State Board of Health will permit a hospital for crippled children shall be erected and equipped in accordance with the terms of the Act of 1911 providing for the same.

In conclusion, the State Health Officer wishes to express his thanks and appreciation to every member of the Executive Office, which includes the laboratory divisions, for the diligence which has been shown in carrying out the duty and apportionment of work which has been given to each to fulfill. By a cheerful and willing cooperation my associates in health

work have shown a deep interest in the welfare of the institution, which is greatly appreciated. To yourself and the other members of the Board the State Health Officer expresses his grateful acknowledgments for the generous support given him in executing the policies of the Board.

Respectfully submitted,

JOSEPH Y. PORTER,
*State Health Officer and Executive
Officer of the Board.*

HYDROPHOBIA Treatment Administered for its Prevention, by the State Board of Health, During 1914

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Treatment		Liability
									Begun	Ended	
442	6	M*	Jacksonville	Bite	Lip	Jan. 4	Dog	Clinical	.....	.....	Indigent
443	15	M	Dowling Park	Bite	Hand	Jan. 4	Dog	Negri bodies	Jan. 8	Jan. 28	Indigent
444	6	M	Ft. George	Bite	Thumb	Jan. 5	Dog	Negri bodies	Jan. 11	Jan. 31	Indigent
445	35	F	Newberry	Bite	Cheek	Dec. 1	Dog	Negri bodies	Jan. 19	Feb. 8	Paid
446	30	M	Dowling Park	Bite	Leg	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8	Indigent
447	21	M	Dowling Park	Bite	Buttock	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8	Indigent
448	27	M	Dowling Park	Bite	Thumb	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8	Indigent
449	15	M	Dowling Park	Bite	L. Thigh	Jan. 17	Dog	Negri bodies	Jan. 20	Feb. 8	Indigent
450	18	M	Dowling Park	Bite	Thigh	Jan. 17	Dog	Negri bodies	Jan. 21	Feb. 9	Indigent
451	43	M	Newberry	Bite	Hand	Dec. 10	Dog	Negri bodies	Jan. 23	Feb. 12	Paid
452	4	..	Tampa	Bite	Head and Arm	.....	Dog	Negri bodies	Feb. 12	Mar. 3	Indigent
453	36	F	Jacksonville	Bite	Finger	Feb. 17	Rat	Negri bodies	Feb. 20	Mar. 12	Paid
454	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 25	Mar. 17	Indigent
455	35	M	Live Oak	Bite	Calf Leg	Feb. 20	Dog	Negri bodies	Feb. 26	Mar. 18	Unsettled
456	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19	Indigent
457	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19	Indigent
458	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 27	Mar. 19	Indigent
459	Ad	M*	Ocala	Bite	.....	.....	Dog	Negri bodies	Feb. 28	Mar. 20	Indigent
460	Ad	M*	Live Oak	Bite	.....	.....	Dog	Negri bodies	Mar. 6	Mar. 26	Indigent
461	Ad	F	Jacksonville	Saliva	Arm	Mar. 11	Dog	Negri bodies	Mar. 16	Apr. 5	Indigent
462	10	M	Jacksonville	Saliva	Hands	Mar. 11	Dog	Negri bodies	Mar. 16	Apr. 5	Indigent
463	11	M	Jacksonville	Saliva	Hands	Mar. 11	Dog	Negri bodies	Mar. 16	Apr. 5	Indigent
464	38	M	Tampa	Bite	Hand	Mar. 12	Dog	Negri bodies	Mar. 24	Apr. 13	Indigent
465	11	M	Tampa	Bite	Hand	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13	Indigent
466	42	M	Tampa	Bite	Leg	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13	Indigent
467	20	M	Tampa	Bite	Hand	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13	Indigent
468	26	M	Tampa	Bite	R. Leg	Mar. 16	Dog	Negri bodies	Mar. 24	Apr. 13	Indigent
469	2	M	Tampa	Bite	.....	.....	Dog	Negri bodies	Mar. 30	Apr. 19	Indigent

470	M*	Tampa	Saliva	Thumb	Apr. 8	Cow	Negri bodies	Apr. 14	May 4	Paid
471	M*	Live Oak	Bite	R. Hand	Apr. 23	Dog	Negri bodies	Apr. 30	May 20	Indigent
472	F	Tampa	Bite	Finger	Apr. 27	Dog	Negri bodies	Apr. 30	May 20	Paid
473	F	Newburn	Bite	L. Leg	Apr. 22	Dog	None	May 1	May 21	Paid
474	F	Tampa	Bite	Wrist	Mar. 31	Cat	Inoc. Rabbit	May 2	May 22	Paid
475	M	Tampa	Bite	R. Thumb	.....	Dog	Negri bodies	May 4	May 27	Paid
476	M	Tampa	Bite	Leg	Apr. 29	Dog	Negri bodies	May 5	May 25	Indigent
477	Ad	Jacksonville	Bite	.....	May 7	Dog	Negri bodies	May 10	May 30	Paid
478	F	Jacksonville	Saliva	Finger	May 7	Dog	Negri bodies	May 10	May 30	Paid
479	M	Jacksonville	Bite	Finger	May 7	Dog	Negri bodies	May 10	May 30	Paid
480	F	Greenwood	Bite	Hip	May 7	Dog	Negri bodies	May 10	May 30	Paid
481	M	Zephyrhills	Bite	Thumb	May 9	Hog	Negri bodies	May 12	Jun. 1	Unsettled
482	F	Jacksonville	Bite	Thumb	May 11	Cat	Clinical	May 16	Jun. 5	Indigent
483	M	Jacksonville	Bite	Thumb	.....	Cat	Negri bodies	May 16	Jun. 5	Indigent
484	F	Jacksonville	Bite	Finger	May 19	Cat	Negri bodies	May 21	Jun. 10	Unsettled
485	M	Tampa	Bite	Hand and Legs	.....	Cat	Negri bodies	May 21	Jun. 10	Paid
486	F	Tampa	Bite	Leg	.....	Cat	Negri bodies	May 28	Jun. 17	Paid
487	M	Jacksonville	Bite	Thumb	.....	Cat	Negri bodies	May 29	Jun. 18	Indigent
488	F*	Sneads	Bite	.....	.....	Dog	Clinical	May 31	Jun. 20	Indigent
489	M*	St. Augustine	Bite	Hand and Arm	May 28	Dog	Clinical	May 31	Jun. 20	Indigent
490	M	Oklawaha	Bite	Shoulder	May 31	Dog	Clinical	Jun. 3	Jun. 20	Indigent
491	F*	Oklawaha	Bite	R. Hand	Jun. 8	Dog	Negri bodies	Jun. 12	Jul. 2	Indigent
492	F	Jacksonville	Bite	Arm	Jun. 8	Dog	Negri bodies	Jun. 13	Jul. 3	Indigent
493	M*	Micanopy	Bite	Hand and Leg	Jun. 12	Dog	Clinical	Jun. 15	Jul. 5	Indigent
494	M	Green Cove Spgs.	Bite	R. Leg	Jun. 9	Cat	Clinical	Jun. 19	Jul. 7	Indigent
495	M	Jacksonville	Bite	Buttock	Jun. 14	Dog	Suggestive	Jun. 18	Jul. 6	Paid
496	M	Jacksonville	Bite	Leg	Jun. 13	Dog	Clinical	Jun. 18	Jul. 6	Indigent
497	F*	Jacksonville	Bite	Thumb	Jun. 21	Cat	Clinical	Jun. 24	Jul. 14	Indigent
498	M	Madison	Bite	Foot	.....	Cat	Negri bodies	Jul. 9	Jul. 29	Indigent
499	F	Bartow	Bite	Ankle	Jul. 11	Dog	Clinical	Jul. 16	Aug. 11	Paid
500	M	Jacksonville	Bite	Leg	Jul. 9	Dog	Negri bodies	Jul. 18	Aug. 9	Paid
501	M	Tampa	Bite	Leg	Jul. 24	Dog	Negri bodies	Jul. 27	Aug. 16	Paid
502	M	Cedar Keys	Bite	Thumbs	Jul. 22	Dog	Negri bodies	Jul. 27	Aug. 16	Paid
503	F	O'Brien	Bite	Leg	Jul. 23	Dog	Negri bodies	Jul. 30	Aug. 19	Indigent
504	Ad	O'Brien	Bite	Leg	Jul. 23	Dog	Negri bodies	Jul. 30	Aug. 19	Indigent
505	M	S. Jacksonville	Bite	Finger	Aug. 6	Dog	Clinical	Aug. 17	Sep. 6	Paid
506	M*	Tampa	Bite	Hand and Foot	Aug. 6	Dog	Clinical	Aug. 18	Sep. 7	Paid
507	F	Hawthorne	Bite	Leg	Aug. 14	Dog	Negri bodies	Aug. 20	Sep. 9	Indigent
		Havana	Bite	Hand	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid

HYDROPHOBIA—Continued

Treatment Administered for its Prevention, by the State Board of Health, 1904

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Method	Begun	Ended	Result
				Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
				Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
				Bite	Foot	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
				Bite	Fingers	Aug. 17	Dog	Negri bodies	Aug. 26	Sep. 15	Paid
				Bite	R. Thumb	Aug. 18	Kitten	Clinical	Aug. 27	Sep. 16	Indigent
				Bite	Abdomen	Aug. 26	.....	Clinical	Aug. 31	Sep. 20	Indigent
				Bite	Arm	Sep. 1	Dog	Clinical	Sep. 3	Sep. 23	Paid
				Bite	Toe	.....	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
				Bite	Ear and Face	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
				Bite	L. Leg	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
				Bite	Forearm	Sep. 3	Dog	Negri bodies	Sep. 9	Sep. 29	Indigent
				Bite	L. Elbow	Sep. 1	Dog	Negri bodies	Sep. 12	Sep. 29	Indigent
				Bite	L. Elbow	Sep. 3	Dog	Negri bodies	Sep. 12	Oct. 3	Indigent
				Bite	Head & Hands	Sep. 10	Dog	Negri bodies	Sep. 12	Oct. 3	Indigent
				Bite	L. Knee	.....	Dog	Negri bodies	Sep. 14	Oct. 4	Indigent
				Bite	Hand	Sep. 25	Dog	Negri bodies	Sep. 28	Oct. 18	Paid
				Bite	Finger	.....	Cat	Negri bodies	Sep. 30	Oct. 20	Indigent
				Bite	Hand	Oct. 1	Dog	Negri bodies	Oct. 4	Oct. 24	Paid
				Bite	Forearm	.....	Dog	Clinical	Oct. 26	Nov. 15	Indigent
				Bite	.....	.....	Dog	Negri bodies	Oct. 28	Nov. 17	Indigent
				Bite	Hand	Nov. 12	Dog	Negri bodies	Nov. 21	Dec. 11	Paid
				Scratch	Hand	Nov. 25	Dog	Clinical	Nov. 29	Dec. 19	Paid
				Bite	Upper Lip	.....	Dog	Negri bodies	Nov. 30	Dec. 20	Paid
						Dog	Clinical	.....	.....	Indigent

EXPLANATORY NOTES.

Case 442: Child could not be located when treatment arrived. Treatment canceled.

Case 461: Patient had scratches on arm and was licked by dog after showing symptoms of rabies.

Case 462: Patient had sores on hands and arms, supposed to have been licked by rabid dog.

Case 463: Sores on hands of patient licked by dog having symptoms of rabies.

Case 470: Patient had hand in cow's mouth. Crack in skin on thumb supposed to have become infected.

Case 478: Abrasion on second finger of patient received saliva of dog found to be rabid.

Case 493: Cat had been bitten by mad dog prior to biting child.

Case 512: Animal had several convulsions morning of biting boy. Was killed and head submitted to State Board of Health. Found negative. Animal inoculation resulted in death of inoculated animal, from unknown cause. There having been a number of rabid animals in Live Oak some time prior to the bite, treatment was considered advisable.

Case 525: Dog that bit child had what is known as "black tongue;" was killed and head carried to physician, who told parents there was no danger, and threw head in river. Later on a dog that had been bitten by this dog went mad. Treatment was then ordered through another physician.

Case 528: Two dogs and pig bitten by dog same day as patient, developed disease about November 26.

Case 530: Because of location of bite, treatment was ordered immediately and dog held under observation. Dog was found not to be rabid, and treatment was canceled.

HISTORY OF ANIMALS FOUND POSITIVE FOR
RABIES BY MICROSCOPICAL EXAMINATION

Case 444: Dog, family pet. Showed practically no symptoms of rabies previous to bite, except being a little peevish and irritable. Child was playing with animal at time bitten.

Case 445: Pet dog. Had heavy cold. Neighbors thought dog mad. Not known how infected. Ran a mild course and died.

Cases 446, 447, 448, 449: Dog viciously attacked four men, severely biting all of them. Escaped, but later found, killed, and head submitted for examination.

Case 450: Bitten by same dog as in case 446 but at different time.

Case 451: Bull terrier. Had at first loss of appetite and was gaunt and lazy, developing later an apparent pneumonia, paroxysms of whining as if in severe pain which became more frequent and more severe until death occurred.

Case 452: Dog bit child severely, as well as a number of dogs in neighborhood.

Cases 455, 460: Parties instructed to shut dog up, which had become vicious and wanted to snap and fight everything it came in contact with. However, owner killed dog and submitted its head for examination.

Cases 461, 462, 463: A bull puppy about eight months old bitten by dog passing through at night. Gradually developed pronounced symptoms of rabies. Killed and head sent to State Board of Health laboratory for examination.

Case 470: Cow died, and head sent to laboratory for examination.

Case 474: Pet cat. Head examined by microscope, but no trace of Negri bodies found, March 31. Rabbit was then inoculated, which died April 28, and upon microscopical examination, showed presence of Negri bodies.

Case: 475: Pet French poodle. Showed practically no symptoms.

Case 480: Dog. Was attacked several weeks before by dog at night. For several weeks before being killed would notice no one.

Cases 483, 484: Cat attacked patient in yard. Patient did not see cat, as it came up behind her. Cat was killed while biting and scratching patient.

Case 499: Dog. Barking, biting, wandering from home. Died of convulsions.

Case 500: Dog. Killed by police department.

Case 501: Dog. First symptoms, July 12; distemper; couldn't get up. Mad spasms of throat and legs; would not eat or drink; had cough. Dog killed.

Cases 502, 503: Dog. Snapping and biting other animals.

Case 506: Strange dog from Johnson station reached Hawthorn in morning and began traveling from one house to another biting dogs and at one house bit colored baby. Owner claims dog was seemingly in normal condition the evening before, ate supper heartily, but attacked cows and hogs that night, and then left home.

Cases 507, 508, 509, 510, 511: Symptoms not definite; dog acted suspiciously for several days, dying in convulsions soon after. Had been diseased with mange for some time, and got to snapping at all children coming in contact with. On fifth day after biting children, the dog drank water, had a fit and died.

Cases 516, 517, 518, 519, 520: Pointer, 19 months old. Began by acting restless, became cross, snapping everything near. No appetite, very restless. Dog killed and head sent to laboratory.

Case 521: Dog. Quiet and friendly until night before patient was bitten. Was in fight with several dogs in owners' yards that night and was not seen again until neighbor's child was bitten next day.

Case 523: Boy helping to catch dog, which was running about without muzzle, when dog bit him. Dog was playful and ate after biting child. Dog presented almost no symptoms of rabies.

Case 529: Dog. Foamed at mouth. Saliva and foam covered patient's hands while holding dog. Received scratch on palm of hand.

DEATHS FROM HYDROPHOBIA, 1914.

Ellaville, Madison County—N. H., aged negro, died November 8th. Walking to his home in country at night, and sat down by roadside to rest. Dog passed by and growled. He scolded it, and struck it with coat, when dog jumped at him and bit him over the eye. The wound readily healed and noth-

HYDROPHOBIA—Continued

Treatment Administered for its Prevention, by the State Board of Health, During 1914

DISTRIBUTION OF CASES BY COUNTIES AND TOWNS

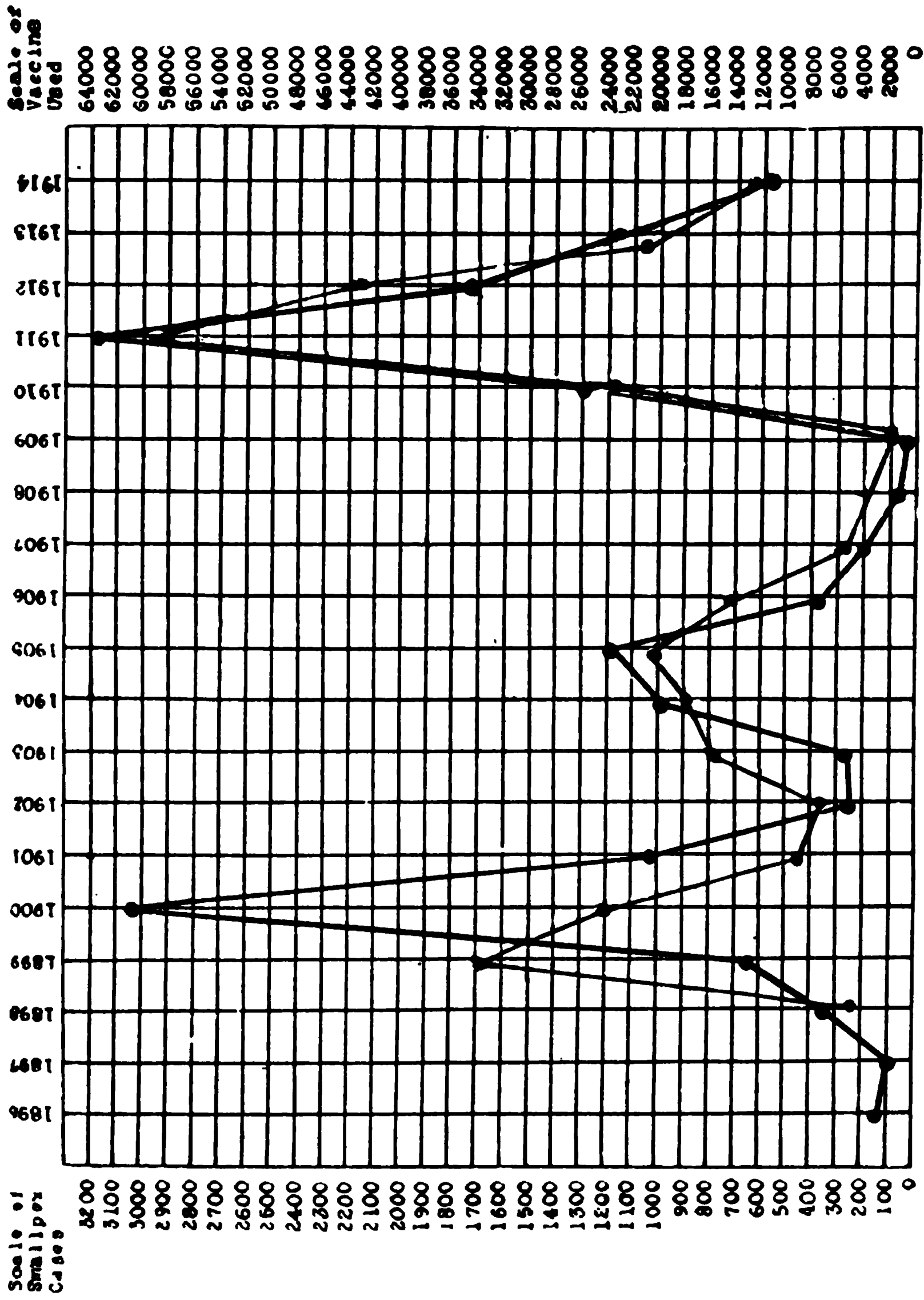
County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
LEON	1	..	..	..	..	..	..	1
LEVY	1	..	..	..	..	..	..	1
Cedar Keys	1	..	..	..	..	..	1	..
LIBERTY	1	..	..	..	..	..	..	1
MADISON	1	..	..	..	..	..	1	..
Madison	1	..	..	..	..	..	1	..
MANATEE	5	..	..	..	2	..	1	..	..	..	..	..	8
MARION	5	..	..	..	2	..	1	..	..	..	..	6	..
Ocala	5	..	..	..	..	..	1	..	..	..	..	2	..
Oklawaha	2	..	..	..	..	..	..	2	..
MONROE
NASSAU
ORANGE
OSCEOLA
PALM BEACH.....
PASCO	1	..	..	..	..	..	..	..	..	1
Zephyrhills	1	..	..	..	..	..	..	..	1	..
PINELLAS	1	..	..	..	..	..	..	1
POLK	1	..	..	..	..	..	..	1
Bartow	1	..	..	..	..	..	1	..
PUTNAM
SANTA ROSA.....
SEMINOLE
ST. JOHNS.....	1	..	..	..	..	..	1	..	2
St. Augustine	1	..	..	..	..	1†	..	2	..
ST. LUCIE.....
SUMTER
SUWANEE	6	1	1	1	1	..	2	1	..	1	..	..	..	14
Dowling Park.....	6	..	..	..	..	..	..	..	..	1	..	..	7	..
Live Oak.....	..	1	1	1	..	..	..	1	..	..	..	..	4	..
Newburn	1	..	..	..	..	..	..	..	1	..
O'Brien	2	..	..	..	..	..	2	..
TAYLOR	5	..	..	..	..	5
Perry	5	..	..	..	5	..
VOLUSIA
WAKULLA
WALTON
WASHINGTON
Totals	10	8	10	3	16	8	7	10	10	3	3	1	89	89

*Child could not be located when treatment arrived.

†Dog held under observation failed to develop rabies. Treatment not given.

REPORTED CASES OF SMALLPOX IN FLORIDA, 1914
(With Vaccinations Done*)

County	January	February	March	April	May	June	July	August	September	October	November	December	Total Cases	Vaccinations done
Alachua .....	..	33	34	6	2	1	..	..	..	..	..	..	76	1,219
Baker	1	..	..	..	..	..	..	..	..	..	..	..	1	20
Bay .....	..	..	..	..	..	..	..	..	..	..	..	..	..	10
Bradford	1	..	2	2	..	..	6	..	..	..	..	3	14	250
Brevard .....	..	1	1	..	..	..	..	..	..	..	..	..	2	50
Calhoun .....	..	..	31	1	..	..	..	..	..	..	..	..	32	70
Citrus .....	..	1	..	1	2	..	..	..	..	..	..	..	4	70
Clay .....	..	..	..	1	1	..	..	..	..	..	..	..	2	40
Columbia .....	..	..	..	2	6	..	..	..	..	..	..	..	8	90
Dade	2	..	..	..	..	..	..	..	..	..	..	..	2	140
DeSoto .....	..	..	..	..	1	..	..	..	..	..	..	..	1	3
Duval	20	4	13	14	6	2	..	..	..	..	..	..	59	904
Escambia .....	..	2	1	11	3	..	..	..	1	..	..	..	18	130
Franklin .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gadsden .....	..	1	..	..	..	..	..	..	..	1	..	..	2	600
Hamilton .....	..	..	..	..	..	..	..	..	..	..	..	..	..	70
Hernando .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hillsborough..	1	19	8	18	14	13	..	1	..	4	..	..	78	1,220
Holmes .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson .....	..	..	..	14	..	..	1	..	..	..	..	..	15	50
Jefferson .....	..	..	..	..	..	..	..	..	..	..	35	11	46	360
Lafayette .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lake .....	..	..	..	6	2	1	..	..	..	..	..	..	9	130
Lee	3	2	..	..	..	..	..	..	..	..	..	..	5	210
Leon .....	..	..	..	..	..	..	..	..	..	..	..	..	..	160
Levy .....	..	2	2	..	..	..	..	1	..	..	..	..	5	480
Liberty .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madison .....	..	1	..	..	..	..	..	..	..	..	..	..	1	..
Manatee	1	..	1	..	..	..	..	..	..	..	..	..	2	160
Marion .....	..	..	..	..	2	..	..	1	..	..	..	..	3	302
Monroe	3	..	..	..	..	..	..	..	..	..	..	..	3	60
Nassau .....	..	..	..	..	..	..	..	..	..	..	2	..	2	25
Orange .....	..	..	..	..	..	..	..	..	..	..	..	..	..	20
Osceola .....	..	4	2	8	..	..	..	..	..	..	..	..	14	70
Palm Beach...	..	..	..	..	..	..	..	..	..	..	..	..	..	60
Pasco .....	..	..	..	..	..	..	..	..	..	..	..	..	..	10
Pinellas .....	..	..	..	..	..	1	..	..	..	..	..	..	1	50
Polk .....	..	..	1	..	1	..	..	..	..	..	..	..	2	110
Putnam .....	..	..	..	..	..	1	1	1	..	..	..	..	3	72
Santa Rosa...	..	..	..	6	..	..	..	..	..	..	..	..	6	20
Seminole .....	..	..	..	2	..	..	..	..	..	..	..	..	2	130
St. Johns.....	5	..	..	..	..	..	..	..	..	..	..	..	5	580
St. Lucie.....	..	..	..	..	..	..	..	..	..	..	..	..	..	40
Sumter .....	..	..	..	..	..	..	..	..	..	..	..	..	..	20
Suwanee .....	..	..	2	..	..	..	..	..	10	..	..	6	18	130
Taylor	1	..	4	1	..	..	..	..	..	..	..	..	6	170
Volusia .....	..	33	31	68	1	1	..	1	..	..	..	..	135	2,765



PREVALENCE OF SMALLPOX IN FLORIDA, 1896 to 1914

Black lines represent number of cases reported, by years.

Red lines represent number of vaccinations done, by years.

REPORTED CASES OF SMALLPOX IN FLORIDA, 1914—Contd.
(With Vaccinations Done*)

County	January	February	March	April	May	June	July	August	September	October	November	December	Total Cases	Vaccinations done
Wakulla
Walton	1	..	..	..	..	..	..	..	..	..	..	1	60
Washington	20
Vaccine points given to Assistants to State Health Officer for general use	1,497
Total													3	12,647

*Number of vaccinations is estimated by vaccine points distributed, which are given out in small quantities at a time, as may be needed for immediate use only. It is believed that nearly all vaccine points distributed are used, and that practically all vaccinations result in "takes."

STATUS OF WATER SUPPLY AND SEWAGE DISPOSAL IN 13 FLORIDA MUNICIPALITIES, 1914

WATER SUPPLY

Municipality	Source of Municipal Supply	Depth of Wells	Average Flow per Minute Gallons	Per Cent. Incorporated Area Supplied	Watershed	Treatment
Eustis	3 drilled deep non-flowing wells (within 4" of surface)	270' 6" 274' 6" 279' 6" Casing 115' to rock	Not known	75%	.....	.....
Gainesville	Drilled deep well and spring	365 ft. Casing 185 ft.	16,000	75%	Inhabited	.....
Green Cove Spgs.	2 drilled deep flowing wells cased	735 ft. 650 ft.	Not known	40%	.....	None
Kissimmee	2 drilled deep flowing wells 8" and 12" casings	379 ft. 418 ft.	Not known	60%	.....	.....
Lake City.....	Deep drilled non-flowing well	400 ft. Casing 110 ft.	500	50%	.....	.....
Leesburg	5 drilled deep non-flowing wells 3 in service, 2 extra, all cased	Average 100 ft. Casing 85-90 ft.	500	100%	.....	.....
Live Oak.....	2 deep drilled non-flowing cased wells (1 well condemned by State Board of Health, not used)	275 ft. 315 ft. Cased entire depth	1,000 1,200	.....	Inhabited Approx. Pop. 3000	.....
Ocala	2 deep drilled non-flowing cased wells 8" and 10" casings	1220 ft. 350 ft. Casings 300 ft. 250 ft.	274 258	60% (All White Pop.)	.....	Sedimentation
Orlando	Spring-fed lake $\frac{3}{4}$ -mile in circumference, 15 ft. average depth	.....	.....	.....	Inhabited Septic tanks used	.....
Palatka	3 drilled deep flowing cased wells	178 to 190 ft. each Casings 80 ft.	545	75%	Inhabited surface privies used	Softening by lime and soda ash
Pensacola	13 driven flowing cased wells	135 ft. Casings 135 ft.	950	95%	Inhabited sewer for sewage disposal	.....
Sanford	3 deep drilled flowing wells cased 8", 6", 3", to rock	265 ft. 275 ft. 140 ft.	Not known	50%	.....	.....
Tampa	20 deep drilled flowing cased wells From spring at times	165 ft. to 362 ft. Casings 52-259 ft.	150	75%	.....	Spring water treated with hypochloride of lime

STATUS OF WATER SUPPLY AND SEWAGE DISPOSAL IN
13 FLORIDA MUNICIPALITIES, 1914

SEWAGE DISPOSAL

Municipality	Method of Sewage Treatment	Year Installed	Final Disposition of Sewage	Per Cent. Incorporated Area Sewered
Eustis	None	.....	.....	.....
Gainesville	Septic Tanks	1907	Sweetwater Branch	60 to 65%
Green Cove Spgs.	Gravity system into St. Johns River	1911 Additions in 1913	St. Johns River	25% (Nearly half population of town)
Kissimmee	2 septic tanks	1910	Lake Tohopekaliga	About 50%
Lake City.....	Septic tanks	.....	Lake Hamburg	About 50%
Leesburg	None	.....	.....	.....
Live Oak.....	Septic tanks	1914	Effluent from tank runs into ground	.....
Ocala	None	.....	.....	.....
Orlando	5 large, 1 small Imhoff Tanks	1913-1914	Deep wells	70 %
Palatka	Gravity system to St. Johns River	1908	St. Johns River	75% of inhabited area
Pensacola	Two cast iron out-falls 20" and 24" in diameter) distance 3,000 ft. from shore into deep water. Outer end under 22 ft. water	1906-1908	Carried away by tidal flow in bay	60%
Sanford	Gravity system to Lake Monroe	1904 Later added to	Lake Monroe	Small percentage of incorporated area. Thickly settled part of town
Tampa	Imhoff Tanks Gravity system	1898 to present time	Doubtful	75%

REPORTS OF

DR. CHAS. WM. BARTLETT,

DR. C. W. D'ALEMBERTE,

DR. J. Y. PORTER, JR.,

DR. W. P. CRIGLER,

DR. J. E. TAYLOR,

DR. M. E. HECK,

DR. C. H. DOBBS,

DR. C. T. YOUNG,

Assistants to the State Health Officer.

DR. JAS. M. JACKSON,

DR. D. G. HUMPHREYS,

Agents of the State Board of Health.

REPORT OF DR. CHAS. W. BARTLETT

SOUTHWESTERN DISTRICT

Tampa, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Upon looking back over the records in this office of the work done during the year 1914, for South Florida, I find that the general condition of health has been good.

The main two diseases in the counties of South Florida have been typhoid fever and diphtheria; and in a general way, the nuisances investigated and abated have been of the same character, open closets and fly infection having played the leading part. Another source of many complaints has been the unsanitary condition of filthy-kept butcher pens and manure piles from stables. The unsanitary condition of private premises has also been reported from time to time but as a general rule, the condition has been more often due to animosity of neighbors than really a nuisance in itself. In some of the smaller towns and outskirts of large cities, the non-compliance with the screening law by restaurants and hotel keepers has been always investigated and abated. Another law coming under the supervision of the State Board of Health, often disregarded, is the keeping and herding of hogs within incorporated towns or cities, and this has always been ended immediately upon notification to this office, due to the fact that the statute concerning this matter is very explicit. Information often requested by citizens from different sections of South Florida on hookworm infection, malaria, and water infection, has always been cheerfully given in every case; and samples of water supposed to be infected have always been collected and examination made. Requests have also been made often to this office by natives of this section of Florida now residing in New York, for birth certificates needed for school attendance, and same have been obtained and forwarded to them whenever possible.

During the year we find that in incorporated towns the sanitary condition has been good, but in all villages that we have visited and in unincorporated towns, I find that there was no provision whatsoever for the collection of night soil and garbage.

As the work has progressed through the year, a special and complete report has been made to the State Health Officer on each and every investigation, giving full detail of the work done, as well as to municipal and federal authorities whenever requested.

Before going into detail by county, it must be borne in mind that Hillsborough being the largest county in population, and this office being in Tampa, the center of population, we are in closer contact with the Tampa physicians and the surrounding districts; therefore, the report for this county is of course more thorough and complete. The fact is, that the number of scarlet fever, diphtheria and typhoid fever cases reported by the physicians, covered nearly every case that existed during the year in this section, which condition of course does not prevail in the other counties.

Hillsborough
County
Smallpox.

At the close of the year 1913, we had two cases of smallpox at the isolation hospital, and during the year 1914, we had altogether sixty-five cases of smallpox, which were divided as follows: The highest number of cases prevailed during April and May, there being sixteen cases in April and fourteen cases in May. We had four months of the year without a single case of smallpox, against two of the previous year. The cases by months occurred as follows: January, 7; February, 12; March, 7; April, 16; May, 14; June, 6; July, 1; October, 2. Out of these 65 cases, nearly all were from the city of Tampa; one case from Plant City; one case from Clearwater, Pinellas County, although treated at the hospital here; three cases came from Valrico, and one case from Jacksonville.

In connection with smallpox, vaccination for the prevention of same has been carried on by this office throughout the year.

Diphtheria.

Diphtheria has continued throughout the year, and in spite of all precautions, such as fumigation, reporting of cases to school teachers, keeping from school infected children, etc., the number of cases has been very large. We have received reports

of diphtheria cases from almost every section of the county. In West Tampa and Tampa we have no less than 167 cases, the highest month being December, forty cases, and the lowest number occurring in July and August, two cases each month. I attribute this large number of diphtheria cases as partly due to the reporting of all cases by the physician in attendance, this year.

Now that our record for one year has been completed, it has been proved that diphtheria is endemic in Tampa. The death rate is nine for the whole year, of which September had the largest rate, three, out of only twelve cases reported during the month. On the other hand in the month of December with forty cases of diphtheria reported, there was only one death.

During the winter months, that is, from January to May, we had altogether ten cases of scarlet fever, of which number, three were out of the city limits, in a close vicinity of Tampa. From other sections of the county no cases were reported, and although cases in town developed in the thickly populated parts, there was no spreading of the cases. In each case the child was isolated in his or her home, and the other children living in the same house were removed to another building. All cases were kept isolated for eight weeks, and were not allowed to report to school until all signs of the disease had stopped. Scarlet Fever.

Typhoid fever prevailed during the whole year, and we had a total of 185 cases. From the month of January up to July, we had the largest number of cases, as follows: January 30, February 19, March 30, April 28, May 12, June 11, and July 12. Then there came a drop in the number of cases with a slight raise again in December. There were only six cases in August, four in September, nine in October, and five in November, increasing to nineteen in December. Typhoid Fever.

It is well at this point to call attention to the fact that as soon as fresh vegetables disappeared from the market, that is, lettuce and celery, there is a considerable decrease in the number of typhoid cases, which increased again with the introduction of fresh vegetables into the market.

All cases of typhoid fever have been investigated as far as the residence and surroundings and source of food supply are

concerned. Each and every case has been marked with a small flag in the map of the city which is kept for this purpose in the office; and here we are able to observe another remarkable coincidence, and that is that in West Tampa, where there is practically no connection with sewerage, the proportion of cases according to population is less than in Tampa, there being only thirteen cases for the whole year, while in Hyde Park we find that in spite of having all the homes screened and connected with sewerage, there have been no less than twenty cases. Upon investigation, the only difference I find in the habits of the people living on both sides of the river, is that in West Tampa very few vegetables are consumed by the people and absolutely no raw milk is taken by the majority of the residents there. The fact is that in not a single case investigated by me was raw milk taken; those not using condensed milk, had their milk supply boiled.

Another fact noticed is that there were no soda water fountains in that section until the month of December, when a new, modern, up-to-date soda water fountain was opened in the corner of Howard and Main Streets, and coincident with the opening of the soda water fountain and the consumption of raw milk, we find that West Tampa had during the month of December four cases of typhoid fever, out of the thirteen reported for the year 1914 in West Tampa. Of course, one single month is too early to reach any conclusion, but we shall watch with care these developments.

Out of the 185 cases investigated we find that 32 patients lived in screened houses; and out of these 32 cases only two eat outside, while 11 of the patients contracted the disease while traveling or outside of their screened homes, which leaves only 19 cases having contracted typhoid fever in spite of living in screened houses. Three of these last 19 cases had open closets within 500 feet from their houses; and four other cases that had to take raw milk out of their homes. We must also bear in mind that a large number of people believe that by simply screening their houses, they are thoroughly protected from flies, and therefore they fail to destroy the flies that get into their premises; so that really instead of counting by screened houses, we should count by fly-proof houses which

undoubtedly would bring the number of those protected from flies to a very small figure. It might as well be mentioned here that although I laid stress on the fact that the people of West Tampa were not using raw milk, we also find that those cases using raw milk in Tampa, had not given us the name of any given dairy often enough, to make me believe that the milk taken was the source of infection. And in soda water fountains, where raw milk is taken, it should not be regarded as the only source of infection, as there is a possibility that infection may also be transmitted by the lack of cleanliness in the glasses furnished the customers. At the same time on two occasions when water has been suspected of contamination, a sample of the water supply has been collected and examination carefully made, and no trace whatsoever found of infection in the water.

Two new cases of leprosy were found during the year 1914. They were all advised to be kept away from public places, and not to come in contact with other people. Miscellaneous.

There were also three cases of poliomyelitis or infantile paralysis. These cases occurred among the Italian colony. One case in the western part of the city of Tampa known as Ellinger; another case on the southwestern part, and the third case in the northeastern section of the city. There was no connection between these families, and although there were several children in each home, those mentioned were the only cases to develop.

There were forty-one cases of chickenpox reported during the year 1914 and they were all investigated for differential diagnosis from smallpox.

Only one case of pellagra was reported from the county throughout the year.

During the summer months intestinal infection among children prevailed, but the acute milk infection or cholera infantum was not reported, and I failed to see a single case during the year, credit for which condition should be given to the inspec-

tion of dairies and milk examination carried out by the Pure Food Department.

Polk County.

The condition of health in Polk County has been good for the year 1914. We had several cases of diphtheria reported from Lakeland and Bartow. There were also a few cases of typhoid fever reported. A nuisance was reported regarding the unsanitary condition of a dumping ground used by the city of Lakeland during the early part of the year. This was immediately corrected by the Mayor of the city upon notification. Also open closets surrounding public schools of which attention was called to the Commissioner of School Board. Examination of the ice plant of Lakeland, and investigation of the sewerage system of Bartow were also made.

Pinellas County.

Nuisances were reported on several occasions during the year from this County, especially at Tarpon Springs, due to the lack of sewerage connection of the Greek settlement and butcher pens in filthy condition both at St. Petersburg and Tarpon Springs. Several cases of typhoid fever were reported also from St. Petersburg, Tarpon Springs and Clearwater. Diphtheria also prevailed in the County during the year.

Manatee County.

There were several cases of smallpox during the early part of the year reported from Palmetto, and epidemic of amoebic dysentery at Ellenton and Terra Ceia during the latter part of the year. Otherwise, the condition of health was most excellent.

DeSoto County.

The health condition of DeSoto County has been good with the exception of typhoid fever which prevailed at Wauchula, Arcadia and quite an epidemic, considering the number of people, at Fort Ogden. There were also a few cases of diphtheria reported from different sections of this county during the year.

Lee County.

One case of smallpox was introduced at Fort Myers from New York, and one case developed there. Several cases of typhoid fever were reported from different sections of this county. Otherwise the condition of this county was exceedingly good.

Investigations of communicable diseases and sanitary nuisances performed outside of Tampa during the year were as follows:

Date	Place	County	Occupation
Jan. 4	Wimauma	Hillsborough	Smallpox
Jan. 20	Fort Myers	Lee	Smallpox
Jan. 31	Valrico	Hillsborough	Smallpox
Feb. 6	Balm	Hillsborough	Smallpox
Feb. 28	Lakeland	Polk	Ice factory—collection water samples for examination
Mar. 27	Palmetto	Maratee	Smallpox
Mar. 29	Plant City	Hillsborough	Smallpox
Apr. 3	Frost Proof	Polk	Smallpox
Apr. 14	Plant City	Hillsborough	Smallpox
Apr. 15	Tarpon Springs	Pinellas	Typhoid fever
Apr. 27	Frost Proof	Polk	Typhoid fever
Apr. 27	Avon Park	DeSoto	Typhoid fever
Apr. 29	Haines City	Polk	Smallpox and public nuisance
Apr. 30	St. Petersburg	Pinellas	Open drain
May 25	St. Petersburg	Pinellas	Slaughter pen
June 4	Bartow	Polk	Sewage
July 14	Tarpon Springs	Pinellas	Oyster beds
Aug. 17	Tarpon Springs	Pinellas	Sanitary nuisance
Aug. 17	Clearwater	Pinellas	Sanitary nuisance
Sept. 11	Tarpon Springs	Pinellas	Sewerage—sanitary nuisance, vital statistics
Oct. 2	St. Petersburg	Pinellas	Underground drainage
Oct. 5	Plant City	Hillsborough	Diphtheria
Oct. 5	Knights Station	Hillsborough	Diphtheria
Oct. 20	Tarpon Springs	Pinellas	Sanitary nuisance—vital statistics
Oct. 22	Dunedin	Pinellas	Sanitary nuisance
Nov. 1	Plant City	Hillsborough	Scarlet Fever
Nov. 3	St. Petersburg	Pinellas	Cesspool nuisance
Nov. 11	Ellenton	Manatee	Alleged epidemic
Nov. 11	Bradentown	Manatee	Interview with physicians
Nov. 11	Manatee	Manatee	Interview with physicians
Nov. 23	Tarpon Springs	Pinellas	Official trip with State Health Officer
Nov. 23	Clearwater	Pinellas	Official trip with State Health Officer
Nov. 23	Dunedin	Pinellas	Official trip with State Health Officer

REPORT OF INVESTIGATIONS MADE DURING THE YEAR 1914
IN TAMPA.

January 1—Smallpox case Florida Avenue investigated and patient removed to Isolation Hospital. Twelve vaccinations.

January 6—Death certificate of a German subject who was accidentally killed at Port Tampa obtained from undertaker upon request

January 8—Smallpox case at Isolation Hospital which came from Clearwater investigated. Nine vaccinations.

January 13—Interviewed Tampa physicians regarding their compliance with the law reporting contagious diseases. Six vaccinations.

January 14—Interview with several of the Tampa physicians regarding their lack of report on typhoid fever cases. Two vaccinations.

January 18—Smallpox case Estelle Street investigated and removed to Isolation Hospital. Sixteen vaccinations.

January 22—Smallpox case Zack Street removed to Hospital.

January 26—Investigation of unsanitary condition private residence. This matter referred to city of Tampa.

January 27—Typhoid fever condition in Tampa investigated on account of the large number of cases for the week ending January 13, 1914. Report made of same.

January 30—Smallpox case inspected and removed to hospital at Tampa, coming from Valrico, Florida. One more case on this date from Valrico.

January 30—Another case of smallpox coming from Valrico removed to hospital.

February 1—Smallpox case at North East Street and West 11th Ave. investigated and removed to hospital. Two more cases on this same date from same address investigated. Eight vaccinations.

February 2, 3, 4, 5, 6—Shell piles inspected at the Garrison, Tampa, Florida, upon request made to abate nuisance. These cases brought before the police court by Chief of the Sanitary Department, to whom the case was referred. Nineteen vaccinations.

February 7—Smallpox case from City Stockade removed to hospital. Another case from 17th Ave. and LaSalle St., West Tampa removed to hospital on this date.

February 8—Smallpox case investigated Scott Street.

February 9—At 15th Street another case inspected and removed to hospital.

February 9—Four more cases of smallpox in Tampa removed to hospital.

February 10—Smallpox case, Jefferson Street investigated and removed to hospital. Twenty-two vaccinations made.

February 23—Smallpox case, Maryland Avenue removed to hospital.

March 6—Investigation of public nuisance on 25th Street, Tampa, Fla.

March 7—Stable inspected upon complaint of neighbors. Report made to City Board of Health.

March 9—Smallpox case, 5th Avenue removed to hospital.

March 11—Smallpox case, Gilchrist Street removed to hospital.

March 13—Investigation of smallpox case at Port Tampa City.

March 16—Unsanitary condition reported on Morgan Street; investigation made.

March 17—Interview with Mayor of Tampa regarding the hydrophobic condition and the prevention of its spreading. Also with Mayor of West Tampa on same subject. Three vaccinations made.

March 21—Smallpox case, 6th Avenue investigated.

March 26—Eight vaccinations made.

March 27—Smallpox case, 6th Avenue investigated.

March 27—Smallpox case, Tyler Street investigated and patient removed to hospital. Twenty-three vaccinations.

March 28—Unsanitary condition at the Boulevard investigated.

March 28—At the request of Principal of the Hyde Park School, the homes of nine pupils were inspected.

April 6—Case of smallpox investigated Washington Street.

April 10—Smallpox case Bell Street investigated and removed to hospital.

April 11—Smallpox case at hospital inspected. Came from Plant City.

April 12—17th Street smallpox case found and removed to hospital.

April 15—Cass Street smallpox case found and removed to hospital.

April 16—Twelve vaccinations made.

April 16—Smallpox case Green Street investigated and case removed to hospital.

April 17—Pierce Street smallpox case found and investigated.

April 18—Krause Street smallpox case reported and investigated.

April 19—Smallpox case Franklin Street removed to hospital.

April 20—Smallpox case Morgan Street removed to hospital.

April 23—Scott Street, case of smallpox investigated.

April 23—Another smallpox case found at same address.

May 1—Case from Morgan Street removed to hospital.

May 4—Case of smallpox on Tampa Street; removed to hospital.

May 6—Investigation at Ybor City of financial condition of patient who tried to obtain free Pasteur treatment found to belong to the Circulo Cubano Society and said Society made to pay for treatment.

May 8—Case of smallpox S. Nebraska Avenue investigated.

May 10—Two cases of smallpox removed to hospital from Scott Street.

May 14—Case from 21st Street removed to hospital.

May 13, 14, 15—Investigation of condition of typhoid fever in connection with lack of consumption of fresh vegetables. Twenty-two vaccinations made.

May 15—Case of smallpox Zack Street investigated.

May 17—Case of smallpox India Street removed to hospital.

May 18—Case on Palmetto Alley investigated.

May 19—Five vaccinations made.

May 21—Investigation of Sanitarium premises due to a complaint received regarding the unsanitary condition.

May 28—Inspection of excavation due to sewage at suggestion of local newspaper. Three vaccinations.

May 29—Investigation Kay Street for differential diagnosis between chickenpox and smallpox.

May 29—Three other smallpox cases at 20th, Nebraska and Lemon Streets, removed to hospital.

June 2—Inspection of City Stockade at request of State Health Officer. Report made of same.

June 4—Two cases of smallpox at City Stockade and Highland Avenue investigated and removed to hospital. Twenty-four vaccinations made.

June 13—Called on for differential diagnosis in a case of smallpox, Whiting Street, Tampa. Six vaccinations made.

June 15—Smallpox case Nebraska Avenue removed to hospital.

June 18—Investigation of riot in Isolation Hospital caused by negro patient and efforts made to arrest him. Whooping cough cases in Tampa and West Tampa investigated.

June 19—Ten smallpox vaccinations.

July 10—Smallpox case Jefferson Street inspected and removed to hospital. Seven vaccinations made.

July 13—Leprosy case inspected, and report of same made.

July 13—Twenty vaccinations.

July 15—Investigation of unsanitary condition at Grand Central Avenue between Oregon and Orleans Streets. Investigation of pond at the request of Mr. MacFarlane at Tampa Water Works, for drainage purposes.

July 19—Two vaccinations.

July 20—Eleven vaccinations.

July 20—Interview with the wholesale houses of Tampa regarding freight cars coming direct from New Orleans.

July 29—Steamers from New Orleans inspected by request of Mayor MacKay.

July 30—Twelve vaccinations.

July 30—Interview with Mayor MacKay on extermination of rats for prevention of bubonic plague. Three vaccinations on this date.

August 5—Investigation of smallpox at "Scrub" and removal of cases to hospital. Two vaccinations made.

August 6—Eleven people vaccinated.

August 13—Investigation of freight cars arriving without posters.

August 14—Investigation of unsanitary cellar at private residence. Inspection of cars going from Tampa to Port Tampa at the A. C. L. Railroad. Thirty-six people vaccinated.

August 19—Interview with Mayor MacKay on extermination of rats.

August 19—Freight cars without certificate inspected.

September 20—Six vaccinations.

September 22—Investigation of diphtheria condition in Tampa at the request of Mayor MacKay. Cases surrounding Michigan Avenue School. Report of same made. Eight vaccinations made.

September 25—Tuberculosis infection in family inspected. Three people vaccinated.

September 28—Interview to obtain list of Eclectic physicians, for State Board of Health. Five vaccinations.

October 1—Inspection of Isolation Hospital.

October 6—Conference with committee St. Petersburg citizens regarding slaughter house nuisance.

October 7—Inspection smallpox case on Estelle Street, and investigation diphtheria case reported by county physician.

October 8—Visit to Isolation Hospital.

October 10—Conference with Secretary of Examining Board concerning list of Eclectic physicians.

October 8—Investigation case smallpox on Estelle Street. Diagnosis made.

October 12—Visit to Isolation Hospital.

October 14—Visit to Isolation Hospital.

October 15—Visit to Isolation Hospital.

October 17—Visit case of smallpox Marion Street. Diagnosis made.

October 18—Investigation case smallpox at Ballast Point.

October 19—Visit to Isolation Hospital.

October 21—Visit to Isolation Hospital.

October 23—Reinspection of underground water contamination at Robles Point.

October 24—Visit to Isolation Hospital, and conference with city authorities regarding drainage wells.

October 25—Conference with City Council and Mayor on diphtheria situation. Conference regarding drainage wells.

October 27—Conference with school commissioners on diphtheria situation Michigan Avenue school. Visit to hospital.

November 5—Inspection of Isolation Hospital.

November 9—Advice with St. Petersburg City Engineer on muddy condition of water in reservoir.

November 10—Investigation of exhumation of body at Woodlawn Cemetery for identification, and issue of permit.

November 10-17—Examination of rats at Tampa laboratory.

November 13—Investigation of nuisance on Tampa Street. Matter taken up with city sanitary department.

November 14—Visit to Isolation Hospital.

November 18—Conference with Tampa Times on Rat Guards.

November 19—With State Health Officer.

November 15-19—Statement to U. S. Port Collector. Twelve notifications to school teachers of diphtheria cases, by mail.

December 1-15—Routine work at office. Report of infectious and contagious diseases for bill of health of out-going vessels, to custom house officer.

December 5, 8, 9, 11, 15, 17, 30—Report of sixteen cases of diphtheria to teachers.

December 27—Conference with councilmen on ordinances for rat guards on in-coming steamers.

December 17—Investigation typhoid fever at Arlington Heights and inspection of Purity Springs furnishing water to Arlington Heights and other sections surrounding Tampa in connection with typhoid fever. Collection of water from said Springs.

December 14—Investigation of water supply Hyde Park Avenue. Collection of water samples.

December 26—Investigation water supply at Buffalo Avenue and surrounding neighborhood at report of outbreak of typhoid fever. Collection of water from two different sources.

December 30—Inspection of dairy premises based on public nuisance Act at request of neighboring citizens.

December 12-26—Investigation reported cases smallpox 14th and 12th Avenues.

Regular daily inspections by sanitary partolman made during the year.

Respectfully submitted,

CHAS. WM. BARTLETT,

Assistant to the State Health Officer.

REPORT OF DR. C. W. D'ALEMBERTE

WESTERN DISTRICT

Pensacola, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—The number of cases of communicable diseases reported to this office from January 1, 1914, to December 31, 1914, was as follows:

Smallpox	19
Tuberculosis	51
Typhoid Fever.....	56
Dyphtheria	34*
Scarlet Fever.....	14
Measles	1

*Out of total cases of diphtheria, 18 were in and around Century.

The number of fumigations by Sanitary Patrolman, from January 1, 1914 to December 31, 1914, was 97.

The number of transit permits, Form 233, issued from January 1, 1914, to December 31, 1914, was 85.

On March 20th, I visited Marianna to inspect conditions of sewerage at the Florida Reform School. The sewerage at that time was being emptied into a vacant lot about one hundred yards from one of the main buildings. This has since been corrected and is now carried off by pipes to sink hole several thousand feet away from the premises.

April 10th, I visited Garnier's Fla., where there were several cases of smallpox at Johnson's still. All persons that had been exposed were vaccinated and no further cases developed.

July 21st I was ordered to New Orleans, La., by the State Health Officer, to report to Dr. W. C. Rucker, Assistant Surgeon-General of the United States Public Health Service, for the purpose of studying the methods employed by this Government in handling bubonic plague. By Dr. Rucker's permission I was allowed to participate in the work commencing with the trapping of the rats to following the complete laboratory pro-

cedure to determine whether they were infected with the bacillus pestis or not.

October 2d was detailed to Century, Fla., to assist the physicians at that place in stamping out an epidemic of diphtheria.

November 19th, I was detailed by the State Health Officer to visit Graceville, Fla., to assist the authorities of that town in stamping out diphtheria.

November 27th, I visited Chipley, Fla., to consult with the physicians of that place regarding a case of diphtheria.

November 27th, I visited Marianna, to confer with the Registrar of Vital Statistics.

During the year I have superintended the disinfection of numerous quarters that have been occupied by persons having contagious diseases. Have inspected in company with the attending physician cases of a suspicious nature and supervised the inspection of freight cars coming into this city from New Orleans, La., to determine if any rodents were harbored therein.

It has been my pleasure and privilege to assist in a small measure the educational work of the State Board of Health by giving talks to various organizations upon health matters.

Respectfully submitted,

C. W. D'ALEMBERTE,
Assistant to the State Health Officer.

REPORT OF DR. JOSEPH Y. PORTER, JR.

SOUTH TROPIC DISTRICT.

Key West, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Health conditions in the South Tropic District for the past year have been excellent; very few of the preventable diseases have occurred and in general the community has experienced one of the most healthful periods of its existence.

This has been due to two factors: first, the screening laws have been rigidly enforced, and secondly, a daily collection of garbage. The latter plays a secondary role when it is considered that all garbage is, as a rule, deposited into coverless cans, and that flies, which are chiefly to be considered in the propagation of intestinal diseases, have been as plentiful in number during 1914, as in former years. It is felt that a further extension of the work against the fly such as a proper regulation of all horse and mule stables, with all toilets made fly proof, will result in a greater decrease in the above mentioned diseases. These matters have been repeatedly taken up with individual members of the City Council, also, the Council itself, and it is hoped that shortly they may be enacted into law.

The question of an incinerator was also brought to the attention of the Council, and a committee was appointed, which, after inspecting and witnessing the operation of all types in the different cities between Key West and New York, in a report recommended the purchase of a Nye Odorless Incinerator; the matter is still under advisement, and it is hoped that, within a short period, at least before the "typhoid season" starts, it will be installed and in operation. At present garbage is deposited on the outskirts of the city and an attempt made to burn it; in dry weather this is fairly successful, but in the rainy season it is a physical impossibility. The Council has been repeatedly informed that this disposal of garbage is

in violation of Rule 47 of the Rules and Regulations of the State Board of Health.

During the past year an attempt was made to collect morbidity statistics; printed post cards were furnished all physicians; these post cards were so arranged that all necessary to do was for the physician to fill in the name and address with other such sociological data as race, sex, etc., and check the disease from the list of printed diseases, and mail to this office. Although assured of the support of each individual physician, the number of reports became smaller and smaller, and finally ceased. Another attempt is to be made shortly along other lines, with greater promises of success.

The District outside of Key West was visited last May. The several railroad camps, and other settlements along the Florida Keys were found to be in good condition; the railroad camps in particular were in a splendid sanitary condition, all kitchens, dining rooms and sleeping quarters being thoroughly screened, and both buildings and surroundings scrupulously clean; nearly all toilets were placed over the water and thus there was a minimum chance of spreading intestinal diseases. In settlements there were primitive toilets, but no hookworm infection was observed, possibly due to the lack of sandy soil. Places visited were Big Coppitt, Chase, Little Pine Key, Boot Key Camp, Marathon, Spanish Harbor Camp, and Bahia Honda.

That there has been a marked decrease in this disease is not to be questioned. Owing to the lack of morbidity statistics, commented upon elsewhere, it is impossible to state the exact prevalence of this disease, but talking the matter over with physicians, all agree that typhoid fever has prevailed to a lesser degree than heretofore. Widal examination, and, in a few cases, blood cultures have been performed for the physicians, but as a rule, they do not seem inclined to avail themselves of the aids to diagnoses. This office has also stated that the State Board of Health is prepared to administer the typhoid vaccine free to the indigent, but as yet, not one person has availed himself of this opportunity. With the making of all toilets fly proof I look for the typhoid rate to be still smaller,

Typhoid Fever.

for it is firmly believed that outside of a few contact cases the disease here is mainly fly-borne.

Smallpox.

Early in January a suspicious case was reported; after two days' observation the patient was released from isolation, the diagnosis not being confirmed. During the latter part of the same month smallpox developed in a person who had but a few days returned from Mexico. The diagnosis was promptly confirmed; as the patient was removed from a steamer whose destination was New York City, the Health Officer there was notified by wire of the facts in the case.

All members of the patients' family were vaccinated, with the exception of one young boy, who refused vaccination, violated isolation instructions, and left the house. As this boy had been in the same room with the patient prior to the rash coming out, and was also said to have slept with him, a warrant was obtained for his arrest, and as the County Commissioners placed a small reward for his capture, he was promptly arrested. A short talk convinced him of the error of his way and he submitted to vaccination and later revaccination, which revaccination gave a splendid take. The patient's mother later developed a confluent case of smallpox and made an uneventful recovery. Since then there have been no further cases. In this connection, I might add that smallpox vaccinations have in a small way been going steadily on; the School Board has been urged to adopt a compulsory vaccination rule, for admittance into the public schools of this county, but up to the present they have not seen fit to follow this advice. As a result there are growing up a large number of unprotected individuals, who will be "fertile ground" should we be ever unfortunate enough to have a mild unrecognized case of smallpox in the community.

Diphtheria.

There have been sporadic cases during the entire year, developing at no time into epidemic proportions. All physicians have been repeatedly urged to submit throat smears to this office, especially in mild sore throats, for it is only in this way that we can hope to control the disease. During April diphtheria developing in two school children, swabs and cultures were made in all suspicious cases in the school room, in an effort to determine the source, all proving negative.

There has also been a decrease in these diseases, due no doubt to the same causes as to the decrease in typhoid. A milk ordinance is now being drawn up to be presented to the Council and it is hoped that they will see fit to speedily pass it.

Infantile
Intestinal
Diseases.

Beginning with July anti-plague measures have steadily proceeded. At my suggestion the city and county have placed a bounty of ten cents on each rat delivered to the laboratory here. Up to the present there have been examined 2,047, all negative for plague. Rat proofing laws have been urged as also the employment of a competent rat catcher, for so soon as the fear and interest in plague began to die down, the daily rat catch dropped to an average of from two to ten. Guinea pig sentinels have been maintained in places along the water front and in houses that receive goods direct from Cuba. When first placed, a few deaths resulted, none suspicious of plague. During October, New Orleans was visited for a period of ten days, and the plague situation and anti-plague measures were studied from every point of view. The experience gained while working in the U. S. P. H. S. Laboratory, under Dr. C. L. Williams, was invaluable, and I am indebted to him and several other officers of this Service for many courtesies received.

Plague.

The campaign against the fly by means of "fly exhibits" and fly posters has been persistently kept up, and I think is beginning to bear fruit, judging by the interest the average person now takes in this subject.

The public schools have been inspected. The School Board has been urged to employ a "school nurse," who in addition to her regular duties as such, can make simple tests for the acuteness of vision and hearing.

The matter of a dipping vat has been brought to the attention of the dairymen looking toward getting the island tick free. When this is a fact, and the island released from quarantine, blooded animals can be then imported and the milking strain of the entire herd raised.

The mosquitoes on the island of Key West have been frequently examined during the past year. No Anopheles have been found.

In numerous examination of feces, no native hookworm infection has been found. Occasionally, a few imported cases have been encountered. The tricocephalus dispar has been found to be a very common infection in children, almost fifty per cent. of children showing the ova.

In my capacity as local surgeon for the Florida East Coast Railway, I have recommended that all employees under forty, excepting those who have had typhoid, be required to take the typhoid vaccine.

The work of the Sanitary Patrolman has been supervised and systematized.

Respectfully submitted,

JOSEPH Y. PORTER, JR.,
Assistant to the State Health Officer.

REPORT OF DR. W. P. CRIGLER

SOUTH CENTRAL DISTRICT.

Ocala, Fla., December 31, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to submit herewith my report of the general health conditions in my district, during the year 1914.

The district comprises the counties of Marion, Lake, Sumter, Citrus, Hernando, Seminole, Orange, Osceola and Pasco.

The general health conditions have been good, with a slight improvement over those of last year.

No epidemics of a serious nature occurred.

Typhoid fever was the most serious disease to contend with, and, in some cases caused considerable alarm. In most all cases the infection was fly-borne.

The open surface closet is a great menace to the health of the state and until the people are educated concerning the necessity of fly-proof closets, and septic tanks, the number of cases will increase yearly. Work has been done along this line by talks with the city authorities and private citizens, advising them of the benefits to be obtained by proper sewage disposal and screening of residences. A number of cases of typhoid existed in the cities of Ocala and Orlando during the spring and summer, but at no time reached a serious stage. In these outbreaks the fly was the carrier of the infection.

Sporadic cases existed throughout the district, in the rural as well as the urban parts.

Typhoid vaccine as a prophylactic was advised and a great many people were protected with it.

Pellagra is causing considerable anxiety, owing to its increase in the district. Cases are reported by all the physicians, but at no place are there a great number of cases.

I found seven cases in one locality in Sumter County and after investigating their etiology, found that the dietary theory was upheld in all cases. The absence of a full diet of animal and leguminous proteids was noted in these cases.

As the treatment and prevention of this disease is now better known we will be in a better position to fight it.

Malaria is still prevalent but not to such an extent as formerly, becoming less and less every year. The people are becoming better educated to the mosquito as the cause of the disease, and are using means to protect themselves, both by screening their houses and doing away with the breeding places of the mosquito.

Two cases of Malaria Haemoglobinuria were reported from Crystal River; both cases terminated fatally.

Hookworm disease prevails as usual in the rural parts, but in the number of positive cases existing, few are so reduced in health as to seek medical attention.

Here again we fall back on the open surface closet as the cause in keeping up this disease, and until they are done away with, the treatment of sufferers is of little avail as they readily become reinfected.

The number of smallpox cases reported from this territory was less than last year, reaching at no time an epidemic. Eight cases occurred in a construction gang in the employ of the Atlantic Coast Line Railroad Company. Two cases were at first reported, but by the close association of the crew in the same car, six others contracted the disease in spite of early vaccination. These cases were isolated and no others followed.

A traveling vaudeville actor was put off the train by a conductor at Williston last February, suffering with smallpox. He was placed in my care for treatment. I had him isolated in a tent outside the city limits and all expenses were paid by the State Board of Health, as he was indigent.

No other cases followed this one. A small outbreak at a sawmill near Umatilla was difficult to handle, owing to the great opposition of the manager to vaccination.

A number of the town inhabitants were vaccinated and the outbreak was confined to the mill.

The smallpox cases seen by me this year were all mild and no deaths occurred. It isn't the severe cases that cause the spread of the disease, but the mild and undiagnosed ones, which are not confined to the house nor have medical aid, and are thus free to wander around and spread the infection.

Smallpox is made endemic by the negro who has no fear of the disease, but is in horror of vaccination. They would far rather have the "bumps" as they term smallpox, than be vaccinated; and very ingenious schemes have to be devised to get them vaccinated.

The communicable diseases of childhood occur in the same proportion as usual, but great good has been done in some localities in their prevention by the medical inspection of schools.

A child with a sore throat, cough, coryza or an eruption is sent home and isolated, and, as these are in great part the first symptoms and most contagious stage of the exanthemata, great good is done in preventing their spread.

Diphtheria occurred in isolated cases in both town and country, but no serious outbreaks resulted. An epidemic at an orphanage at Enterprise was prevented by the administration of immunizing doses of antitoxin to all the inmates. Only the three original cases occurred.

No epidemic of dengue fever existed this year as is usual in some localities.

No serious outbreaks of measles, scarlet fever and chickenpox were reported.

The sanitary conditions of the towns are improving, but the municipal authorities are hard to wake up on this subject. They generally wait until an epidemic of some kind breaks out before starting to clean up.

Ocala has made great strides in matters pertaining to public health and sanitation. A new health ordinance was passed creating a new sanitary code and the office of city physician, whose duties amongst many others, include the daily examination of school children, inspection of dairies, examination of milk and its products; also inspection of meat markets and bakeries. Already good results have been attained, as shown by the absence of communicable diseases of childhood during the school term. Only three cases of chickenpox were reported.

Ocala has under consideration a new sewerage system, which is greatly needed. The majority of the sewage is disposed of by the sewage well system.

Ocala has passed the model vital statistics ordinance and is now in position to get full returns of births and deaths.

Orlando has this year completed a new sewerage system of the Imhoff type. The city is also considering the passage of a new health ordinance, with a provision for the appointment of a city physician. The city is in a good sanitary condition.

Sanford has a good sewerage system and an excellent water supply and is in a good sanitary condition. The health ordinance is good and ably looked after by a city physician.

Kissimmee has lately increased the water supply, with a new well and now has an abundance of good water. The town is well sewered and is in a good sanitary condition.

In the small incorporated towns and those not incorporated, the greatest need is the sewage disposal system and screening of houses. In most places the open surface closet prevails and is their greatest problem of sanitation.

The towns that have municipal water supply have good water free from contamination, as in all cases the supply is from deep cased wells.

The following is a summary of work and details during the year 1914:

Date	Place	County	Occupation
Jan. 3	Longwood	Seminole	Diphtheria
Jan. 12	Winter Park	Orange	Typhoid fever
Feb. 3-13	Kissimmee	Osceola	Smallpox
Feb. 5	Webster	Sumter	Diphtheria
Feb. 16	Mt. Dora	Lake	Sanitary inspection
Feb. 17	Mascotte	Lake	Sanitary inspection
Feb. 19-30	Williston	Levy	Smallpox
Feb. 20	Morrison	Levy	Smallpox
Mar. 21	Kissimmee	Osceola	Smallpox
Mar. 30	Sanford	Seminole	Vital statistics
Apr. 1-7	Kissimmee	Osceola	Smallpox
Apr. 15	Orlando	Orange	Vital statistics
Apr. 17-27	Kissimmee	Osceola	Smallpox
Apr. 29	Umatilla	Lake	Smallpox
May 16	.....	Marion	Smallpox
May 18-20	Holder	Citrus	Smallpox
May 22	Bellevue	Marion	Hookworm campaign
May 23	Dunnellon	Marion	Hookworm campaign
May 25	McIntosh	Marion	Hookworm campaign
May 26	Citra	Marion	Hookworm campaign
May 27	Winter Garden	Orange	Sanitary inspection
May 28	Dunnellon	Marion	Hookworm campaign

Date	Place	County	Occupation
May 29	Bellevue	Marion	Hookworm campaign
May 30	Dunnellon	Marion	Chickenpox
June 4	Citra	Marion	Hookworm campaign
June 17	Oklawaha	Marion	Rabies
June 20	Sanford	Seminole	Vital statistics
July 4	Enterprise	Volusia	Diphtheria
July 13	Dunnellon	Marion	Inspection of wells
July 17	Webster	Sumter	Pellegra
July 20	Dunnellon	Marion	Collecting water specimens
July 24-30	Enterprise	Volusia	Diphtheria
Aug. 4	Ocala	Marion	Smallpox
Oct. 7	Umatilla	Lake	Pellegra
Oct. 23	Sanford	Seminole	Vital statistics
Nov. 4	Tavares	Lake	Sanitary conference
Nov. 13	Mt. Dora	Lake	Typhoid fever
Nov. 21	Orlando	Orange	Sanitary inspection
Dec. 5	Zuba	Marion	Typhoid fever
Dec. 11	.....	Marion	Pellegra

Respectfully submitted,

W. P. CRIGLER,

Assistant to the State Health Officer.

REPORT OF DR. J. E. TAYLOR

CENTRAL DISTRICT.

Gainesville, Florida, January 1st, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville.

DEAR DOCTOR:—I am attaching hereto my annual report for 1914.

Date	Place	Nature of Detail
Jan. 1-22	Jacksonville	Duty in executive office, investigation of smallpox in Duval County, vaccination. Investigation of diphtheria in So. Jacksonville.
Jan. 22-23	Winter Park	Investigating an outbreak of typhoid among the school children.
Jan. 24-25	Interlachen	Investigating an outbreak of diphtheria.
Jan. 26-31	Jacksonville	Duty in executive office. Smallpox investigation and vaccination in So. Jacksonville.
Feb. 1-20	Jacksonville	Duty in executive Office. Continuation of smallpox work in the South Jacksonville section of Duval County.
Feb. 20-28	Tallahassee	Routine work of office of Assistant to the State Health Officer.
Mar. 1-3	Tallahassee	Routine office work.
Mar. 4	Tallahassee	Investigation and isolation of diphtheria case near Tallahassee.
Mar. 5-9	Tallahassee	Routine office work.
Mar. 10-12	Chattahoochee	Visit to the Florida Insane Asylum and conference with staff relative to sanitary conditions.
Mar. 12-31	Tallahassee	Routine office work. Investigation of sanitary nuisance. Conference with local physicians on pellagra.
April 1-5	Tallahassee	Routine office work.
April 6	Tallahassee	Suspicious eruption. Consultation. Diagnosed chickenpox. Isolation.
April 7-9	Tallahassee	Routine office work.
April 10-13	Marianna	Smallpox. Consultation.
April 14-25	Tallahassee	Routine office work.
April 25-30	Blountstown	Suspected smallpox. Isolation. Vaccination.
May 1-3	Blountstown	(Detail of April 25th)
May 4-5	Tallahassee	Routine office work.
May 7	Chipley	Sanitary nuisance. Conference with property owner and Mayor. Abatement.

May 8-18	Tallahassee	Routine office work. Investigation of alleged smallpox. Diagnosed chicken-pox. Meeting of City Council. Ordinance requiring registration of midwives. Ordinance requiring manure bins. Ordinance requiring the muzzling of dogs. Conference with Womens Club. Address to the Parents-Teachers Association.
May 18-23	Greenville	Investigation of outbreak of typhoid. Examination of drinking water. Conference with Mayor and City Council. Visits to patients and talks to nurses on necessity of screening and proper disposition of excreta.
May 23-26	Tallahassee	Routine office work. Visits to typhoid patients. Talks with nurses on necessity of proper screens, disposition of excreta and typhoid vaccination.
May 26-27	Greenville	Further investigation of the typhoid outbreak. Re-examination of water.
May 27-31	Tallahassee	Routine office work.
June 1-4	Tallahassee	Routine office work. Further investigation of typhoid Examination of water. Inspection with recommendations of surface privies.
June 4	Midway	Investigation of two cases typhoid. Recommendations regarding surface privies and water supply. Talks as to the value of screening and typhoid vaccination.
June 5-8	Tallahassee	Routine office work. Investigation of typhoid outbreak continues. Examination of milk.
June 8	Greenville	Further work on typhoid.
June 9-12	Apalachicola	Vital Statistics. Conference with local doctors and City Council on sanitary conditions. Address made the Civic League.
June 12	Woodville and St. Marks	Visited these towns in order to investigate conditions with especial reference to typhoid. No typhoid found. Talked with citizens as to proper measures to prevent its appearance.
June 13	Chaires, Capitola and Lloyds	Typhoid. Talks with citizens and patients respecting the proper disposal of excreta, the role flies play in scattering typhoid, vaccination, screening, etc.
June 14	Tallahassee	Further work on typhoid.
June 15	Midway	Typhoid.
June 16	Tallahassee	Typhoid.
June 17	Wakulla, St. Marks and Woodville	Inspection with reference to the prevalence of hookworm infection.
June 17-20	Tallahassee	Routine office work.
June 20-30	DeFuniak Springs	Investigating an outbreak of diphtheria. Isolation.

July 1-11	Tallahassee	Routine office work.
July 11-18	DeFuniak Springs	Further work on the diphtheria outbreak. Isolation. Immunizing doses antitoxin.
July 18-27	Tallahassee	Investigating an outbreak of sore throat. Examination of milk. Inspection of with recommendations to dairies.
July 27	Quincy	Arranging for showing of Fly Reel under auspices of Civic League.
July 28-31	Tallahassee	Continuation of work on dairies. Demonstration of organism in milk causing the sore throat.
Aug. 1-3	Tallahassee	Routine office work.
Aug. 4-7	Apalachicola and Port St. Joe	Inspection with reference to the possibility of landing rats from incoming ships and lighters. Recommendations to city officials and stevedores as to rat-guards.
Aug. 7-18	Tallahassee	Routine office work.
Aug. 18	Jacksonville	Conference with Drs. Porter and Dobbs relative to work in the Central District, to which I had been transferred.
Aug. 19-27	Gainesville	Routine office work.
Aug. 27-29	Lloyd	Investigation of reported contaminated well.
Aug. 29-31	Perry	Investigation and examination of city water supply. Conference with and recommendations to city officials.
Sept. 2-19	Gainesville	Routine office work. Conference with City Health Officer and City Board of Health regarding health work in Gainesville. Familiarizing myself with conditions prevailing in this section of the state.
Sept. 19	McIntosh	Investigation of pellagra. Conference with local physician.
Sept. 19-30	Gainesville	Routine office work. Beginning medical inspection of school children.
Oct. 1-23	Gainesville	Continuation of medical inspection of school children of Gainesville.
Oct. 23-31	Gainesville	Vaccinating school children. Routine office work. Conferences with local physicians on diphtheria and scarlatina.
Nov. 1-15	Gainesville	Routine office work. Arranging for booth at Alachua County Fair. Conferences with local physicians on diphtheria, scarlatina and pellagra.
Nov. 16-19	Gainesville	Operating booth at county fair. Distribution of literature. Talks with visitors.
Nov. 19-20	Dowling Park	Scarlatina. Isolation.
Nov. 20-30	Lamont	Smallpox. Isolation. Vaccination.
Dec. 1-4	Jacksonville	Attending meeting of the American Public Health Association.
Dec. 4-8	Lamont	Further work on smallpox. Wholesale vaccination. Isolation.

Dec. 8-19	Gainesville	Routine office work. Conferences with local physicians on diphtheria, scarlatina and pellagra.
Dec. 19-22	Newburn	Smallpox. Isolation. Vaccination.
Dec. 22-31		Annual vacation.

As can be seen from the above outline, my work for the year 1914 has been diversified. During this period practically all the public health problems a representative of the Board is called to face have arisen and demanded attention. This makes an extended report of details almost impossible, and with the hope that my report will be clearer as well as more readable, I shall outline the work under the different headings.

My first detail on account of typhoid was to Winter Park. Upon my arrival in this town, and after locating the cases, two in number, as well as the former cases, I made an inspection of what, in my opinion, were the only possible sources of infection, to-wit: the water supply, the access of flies to human excreta and the milk supply. Bacteriological examination of the water and milk supplies eliminated these possible factors, and practically convicted the fly. As all of the cases both active and convalescent, were among the school children, an inspection was made of the school premises where I found conditions extremely bad. The toilet facilities were inadequate and dirty. Flies had access to the excreta at all times, and as the school rooms were not screened, could roam at will over the hands and faces of the pupils. The installation of sanitary closets promptly stopped the progress of the disease. Typhoid Fever.

The next outbreak of typhoid I was called on to assist with was scattered from Greenville to Midway on the Tallahassee division of the Seaboard Railway. Two cases developed in Midway, nine in Tallahassee, four in and around Chaires, one in Lloyds and five in Greenville.

By bacteriological examinations, water and milk as possible causative agents were ruled out in Midway, Tallahassee and Lloyds. Repeated examinations of the water supply of Greenville proved a colon infection of all surface wells, and while the typhoid organism was not found, I am not convinced that the water supply did not have something to do with at least some of the cases, especially as typhoid has been periodically present in and around Greenville for a number of years.

In the towns mentioned above, with the possible exception of Greenville, the ordinary house fly was unquestionably the agent by which the disease was spread. Screening of patients and proper disposal of excreta, with, in Greenville, the additional precaution of using boiled water, all of which I personally supervised, aborted what at the beginning appeared to augur an unprecedented outbreak of this disease.

In the control of these cases, I vaccinated quite a number of people who came in more or less intimate contact with the patients, with the most satisfactory results; and should typhoid break out again this year in Greenville, in addition to the condemnation of surface wells, I would advise general vaccination.

smallpox.

During the year I have been detailed to handle outbreaks of smallpox at DeLand, the South Jacksonville section of Duval County, Marianna, Blountstown, Lamont and Newburn. The number of cases seen were six, twenty to thirty, none, none, twenty-three and four respectively. The diagnosis was confirmed in Duval County, DeLand, Lamont and Newburn. Control of the outbreaks was by isolation and vaccination. Approximately 550 vaccinations were done.

The prevailing type of the disease was discreet; however, I saw several confluent cases, and during the latter part of the year, these severe confluent types seemed to be on the increase. Vaccination has proven, as it always does, wonderfully efficacious. As an illustration of this fact, smallpox was scattered over a large area in and around Lamont, among negroes, where ordinarily few vaccinations could be done on account of the prejudice against it among the colored people, but by virtue of hard work practically the entire population was vaccinated, and as a result the disease was stopped within the short period of two weeks, and now, two months later, no new cases have developed.

As a rule, the people of my section of the state are satisfied with our present method of handling smallpox, i. e., simple isolation and vaccination; however, some few criticize this method and think we should institute the obsolete shot-gun quarantine. Usually a talk to such dissatisfied people will show them the tremendous financial burden such quarantine

would entail and the utter uselessness of it in view of the ease, safety and preventive power of vaccination.

It appears to me that the people generally are becoming more and more convinced of the safety and value of vaccination as it is now performed, and it is no Utopian dream to think that, in the course of a very few years, smallpox will cease to exist as a public health problem in Florida.

I have visited during 1914 South Jacksonville, Interlachen, Tallahassee, DeFuniak Springs and Gainesville in connection with diphtheria. In none of these towns has there been anything like a definite epidemic, with the exception of Interlachen and the nearby town of Kenwood where nine cases were reported. Diphtheria

Control consisted in isolation and disinfection.

In diphtheria, as well as the other exanthemata, I have almost decided that formaldehyde fumigation is useless, and in fact causes harm in most cases on account of the faith placed in it by the laity as well as a good many doctors. In lieu of fumigation, I boil everything that can be boiled, sun for at least twelve hours every thing that can be sunned, and wash with a one to one-thousand solution of bichloride of mercury every thing else with which the patient has come in contact.

During the year, I have had to deal with scarlet fever in Dowling Park and Gainesville. The cases at Dowling Park were children of a boarding house keeper, and, consequently, I could not definitely locate the origin, especially as neither of the two cases had been away from home for a considerable period of time prior to onset and had had no visitors. The most probable hypothesis is an infection brought on the clothing of some boarder. Scarlatina.

The situation in Gainesville has been rather difficult to handle, and while there has been no serious outbreak, new cases have developed from time to time during the past five months. Practically all, if not all, of the patients have been children from the third grade of the public schools. This fact makes it seem probable that there is a scarlet fever "carrier" in this grade, but on account of the little knowledge we have of

the etiological factors it appears impossible to establish this theory or ascertain the origin of the contagion.

Whether it is the climate I am not in position to say, but the fact remains that of the approximately twenty cases I have seen, most have been very mild—in fact, in many of them the diagnosis was impossible until typical desquamation began.

Control was by strict isolation.

Malaria.

I have not had a single detail during the year on account of malaria. I do not mean to intimate by this that there has been absolutely no malaria in the districts in which I have worked, but I do mean to say that malaria, as an epidemical disease, has not been present. I have made it a point to talk with the physicians of the different communities visited regarding the prevalence of this disease, and have found that communities which formerly had hundreds of cases, only had a small number in 1914. The explanation of this fact is, in my opinion, the wider use of screens and the almost universal use of mosquito nets for beds. The knowledge that the mosquito causes malaria has sifted down to even the most ignorant negro, and this, as well as the discomfort of being nibbled on all night, has brought about the more general use of protecting materials.

Pellagra.

I have been called in consultation on pellagra some twenty to twenty-five times during the year. Whether or not this disease is increasing is a question rather hard to decide, but I have personally come in contact with many more cases than formerly.

Until the etiology of pellagra is settled, it seems that nothing can be done from the public health standpoint toward its prevention; however, since the original report of Dr. Goldberger, of the U. S. Public Health Service, I have been advising the dietary regime suggested by him, reinforced by tonics. On account of the nature of pellagra, it is too early yet, in my opinion, for too great hopes to be founded on this method of treatment, but it is true that, for the time being at least, the pellagrins are benefited.

Nothing I have seen would indicate that pellagra is at all contagious or infectious.

Vital statistics has claimed a good deal of my time during this year. As a rule, the public is enthusiastically in favor of it, and in no town have I heard unfavorable comments. Judging from the communities I have visited, and the cordial support this work has received, I think it only a matter of time until we can have state-wide collection of morbidity as well as vital statistics. Personally, I can see no more beneficial work than this, both from the standpoint of public health work and the disabusing of minds prejudiced against our state by the rumored prevalence of certain diseases. In this connection, I wish to say that I have talked with the different physicians with whom I come in contact, and this includes almost every one in Central and West Florida, along the line of the prevalence of certain diseases popularly supposed to be widespread in this state, and I find in almost every locality a low morbidity statement for malaria, especially of the pernicious types, haemoglobinuric fever, amoebic dysentery, etc. An authentic statement of this fact, based on the accurate collection of statistics, could not but have a profound influence on property values. In my opinion such figures would, in the course of five to ten years, increase the value of farm lands from two to five per cent. Vital Statistics.

My work on sanitation during 1914 was, as a matter of course, in an advisory capacity. Sanitation.

I met with the Mayor and City Council of Apalachicola to advise with them regarding the installation of either an Imhoff or septic tank. While no decisive action was taken, I believe it only a matter of time until Apalachicola is provided with adequate sewage disposal facilities. In the meantime, this problem is being fairly satisfactorily handled by means of well constructed surface privies, and upon my last visit to this town an ordinance strictly regulating the construction as well as the handling of excreta from these privies was being enforced.

I also met with the City Council of Quincy on the question of proper disposal of sewage, but on account of a city charter weak in this particular, nothing could be done without creating a great deal of local friction.

The town of Greenville, on account of the infected wells mentioned elsewhere in this report, was visited several times and addresses were delivered both to the Mayor and City Council and to the citizens generally in an effort to have a municipal water supply installed. The depression caused by the beginning of the European war has, for the time being, thwarted all efforts. However, the majority of the voters of the town expressed themselves as being very much in favor of this move, and in all probability the matter will be put through some time during the coming year.

Crusades against the house fly were made in Tallahassee, Apalachicola, Quincy, Chipley and Greenville. In these crusades, our fly-reel was used, and attracted much attention. Talks by local physicians and myself were made, and leaflets briefly setting forth the danger from flies and how to abolish breeding places were given to the audiences. By special request, the reel was shown three times in Apalachicola, twice in Quincy and twice in Tallahassee.

I addressed during the year the Civic Leagues of Apalachicola, Tallahassee and Quincy, the Parents-Teachers Association of Tallahassee, and the City Councils of Tallahassee, Apalachicola, Quincy, Perry and Greenville, on such subjects as the handling of the fly problem, ways in which Civic Leagues could assist in public health work, the common ailments of children, general public health, etc.

The general health of Tallahassee during 1914 was below the average on account of the presence of the infectious diseases. Nine cases of typhoid occurred during the late summer and early fall with two deaths. One case of diphtheria. Two cases chickenpox. No other exanthemata. No malaria.

In June an outbreak of a streptococcic sore throat occurred. In an endeavor to ascertain the causative agent, a bacteriological examination of the milk supply was made with the somewhat astonishing result that every dairy showed contamination of its product with not only the organism associated with this sore throat; but colon bacilli as well, and with bacterial counts ranging up to the enormous total of 265,000,000 per c.c. A crusade for better milk, in which I was ably assisted by the

local authorities as well as the dairymen, resulted in a much better milk and the cessation of sore throat.

In Apalachicola no outbreak of any infectious disease was reported. Very few cases of malaria notwithstanding the fact that this town is surrounded by marshes and the Anopholes can be seen nine months out of the year. The practical absence of this disease promises well for our ultimate control and elimination of a pest that has cost the state untold thousands of dollars. No typhoid. No exanthemata.

Apalachicola.

Health conditions good. No exanthemata. No malaria. No typhoid.

Quincy.

With the exception of the five or six cases of diphtheria, DeFuniak Springs was not visited by any disease other than the diseases which any community, either north or south, is heir to.

DeFuniak
Springs

Until the water supply and surface privy problems of Greenville are settled, health conditions will, in my opinion, remain extremely bad. Hookworm infection and Diarrhoeal diseases are prevalent.

Greenville.

Health conditions in Perry are very good indeed. This is another town where the lowered malarial rate is noticeable. No typhoid or exanthemata.

Perry.

Health of the community good. No infectious diseases except, possibly, a sporadic case or two.

Live Oak.

This town, as well as High Springs, Alachua and Fort White, has had an exceptionally healthy year. With the exception of sporadic cases of the exanthemata no serious diseases have occurred aside from, of course, the diseases which we have not as yet found a method of preventing.

Lake City.

The morbidity rate of Gainesville is low compared with cities of the same population in other parts of the United States. While it is true that cases of scarlatina and diphtheria have developed from time to time, prompt work has prevented anything approaching an epidemic.

Gainesville.

Chaires, Midway, Woodville, St. Marks, Lloyds, Lamont, Driftin, Chipley, River Junction, Dowling Park, Hampton Springs, Newberry, Sopchoppy, Capitola, Blountstown, Wewa-hitchka, Marianna, Cottondale, Winter Park, Interlachen,

Kenwood, Palatka, Port St. Joe and Monticello have all been visited during the year and with the exception of the diseases noted in the list of details, the health has been found to be uniformly good.

Respectfully submitted,

J. E. TAYLOR, M. D.,

Asst. to the State Health Officer.

REPORT OF DR. M. E. HECK

EAST COAST DISTRICT.

St. Augustine, Fla., December 31st, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—As Assistant to the State Health Officer, I respectfully submit my report for the year ending December 31st, 1914.

In my last report I attempted to give you an idea as to the prevalence of the various communicable diseases in my district. However, as there is no adequate state law by which morbidity reports may be accurately collected, my previous report in this respect was valueless for statistical purposes. For this reason I have omitted my report by counties as was my plan last year. This year I shall confine myself to my monthly reports as submitted to the State Health Officer, with a more complete report on special details, and a few suggestions which I respectfully offer; they are based upon a careful and serious consideration of conditions now existing in my district.

Special details are as follows:

January 8th—St. Augustine—Investigated alleged shipments of clams taken from San Sebastian river opposite F. E. C. railroad shops. These shipments were stopped pending investigation, but as no contamination was proved by examination of specimens of clams sent to the laboratory no further steps were taken.

January 12th—St. Johns County—Began hookworm investigation in some of the country schools. During this investigation I visited the following public schools of St. Johns County with the results stated.

Hastings—Assembled the four schools in one room and gave talk on hookworm disease after which sample cases were distributed. Many children looked as though they were infected, but the principal of this school never submitted specimens so there is no way of telling the percentage of pupils infected.

At Billingsville we had the same lack of interest. There are undoubtedly cases in this school but no specimens were received for examination.

Moultrie school submitted eighteen specimens of which thirteen were positive hookworm cases; New Augustine (two schools) submitted forty-five specimens of which thirty-six were positive; and Julington Creek school submitted sixteen specimens of which fifteen showed infection. Free treatment was given to pupils of Moultrie and Julington Creek schools.

January 21st to 23rd—West Palm Beach—Investigated alleged insanitary condition of Lake Worth. The principal complaint was from per-

sons who objected to bad odors noticed along the shore at various points. This was apparently from accumulations of seaweed and rubbish along the waterfront and not from sewage as supposed. However, the odors noticed seem to have helped influence public opinion as West Palm Beach is now well sewered by a septic tank system.

While at headquarters in St. Augustine during part of January much of my time was spent in microscopic examinations of hookworm specimens from the public schools and various minor investigations.

February 6th to 10th—Titusville—Detailed to Titusville to investigate cause of typhoid fever. Began with one imported case, probably transmitted to others through agency of flies. On this detail I addressed the Progressive Culture Club and the city council. The latter passed an ordinance creating a city board of health, and the bucket system of fly proof privies was installed in those portions of Titusville not drained by sewers.

March 13th to 18th—Daytona—Investigated source of infection of cases of typhoid fever at Daytona, and Seabreeze. Oysters used at Hotel Clarendon and oysters taken from Halifax river right below city limits of Daytona showed evidence of sewage contamination, consequently oysters were determined to be the probable cause of the epidemic since all the patients in this epidemic had eaten raw oysters.

March 24th to 26th—Cocoa—Isolated one case of smallpox (colored) and vaccinated over a hundred people—white and colored.

March 27th to May 2nd—DeLand—Was in charge of smallpox epidemic at DeLand and vicinity, isolated over fifty cases of whom four were white persons, and vaccinated 632 negro and 104 whites. During my stay in DeLand, while smallpox patients were being cared for in the isolation camp, an exhibit was held in one of the store windows in DeLand showing how flies breed in horse manure. Following this exhibit there was a general clean up of all the horse stables and dairies and an active crusade against flies.

On the day of my return from this detail I carried samples of milk to the laboratory from the dairies of DeLand and Daytona, all of which showed high bacterial counts and many of which showed the presence of colon bacilli.

May 10th to 12th—Fellsmere—Inspected alleged insanitary conditions of all premises in Fellsmere and made recommendations for improvement. As a result the Fellsmere board of sanitation issued a booklet ordering all property owners to comply with the recommendations.

May 13th—New Augustine—Inspected alleged insanitary conditions reported by Mr. Guerin of New Augustine.

May 25th to June 13th—New Augustine—Combined fly exhibit and hookworm campaign in New Augustine. Few examinations were made but as a result of this work a sanitary committee of citizens was formed and a pamphlet was issued recommending general improvement in sanitary conditions, and the building of pit system fly proof privies. About fifty per cent of the people complied.

June 21st to 22nd—Largo, Florida—Gave illustrated lecture on sanitation.

July 1st to 2nd—Fellsmere—Inspected premises and on evening of July 2nd gave talk on hookworm disease, and sanitary privies. My inspection showed that all premises in Fellsmere were supplied with sanitary privies. The sanitary committee was made a permanent organization, the bucket system of fly proof privy was adopted and buckets are emptied by scavenger once each week. At the time of this visit Fellsmere was in excellent condition from a sanitary standpoint.

July 11th—Palatka—Called on Mr. Williams, city clerk, in an effort to obtain better returns of Vital Statistics.

July 26th to August 21st—Daytona—During this period, with the assistance of Dr. Roy Howe, city physician, over a dozen cases of diphtheria were isolated and free antitoxin was administered to the indigent, both for curative and immunizing purposes.

During my stay in Daytona two cases of chicken pox (white) and one case of smallpox (colored) were isolated. Over four hundred persons were vaccinated of whom all but three were colored.

At Kingston, a suburb of Daytona, where most of the cases of diphtheria occurred, insanitary surface privies were condemned and as a result nearly all of these were replaced by fly proof vault system privies.

While at Daytona I received notice to make investigation of alleged insanitary conditions at South Melbourne. I went to Melbourne August 19th, returning to Daytona next day. No results seem to have followed this visit. The request for a representative of the State Board of Health came from colored people, but I was subsequently unable to learn whether any of my recommendations had been complied with.

September—No special duties or details. Routine office consultations and correspondence.

October 6th to 7th—Palatka—Addressed city council and recommended passage of "Model Ordinance" for reporting of Vital Statistics.

October 8th—Green Cove Springs—Addressed city commissioners relative to insanitary privies and recommended that they pass an ordinance with a view to improving conditions. Also recommended that they pass the "Model Ordinance" for the reporting of Vital Statistics.

October 15th—St. Augustine—Addressed a public meeting on "The Value of a District Nurse." Such nurse has since been employed.

October 17th—New Augustine—Isolated case of scarlet fever.

October 21st—St. Augustine—Called on case of pellagra and reported same to headquarters.

November 4th—New Augustine—Addressed Village Improvement Association on hookworm disease.

November 5th to 7th—Fort Pierce—Inspected alleged insanitary restaurant and made recommendations for improvement. Also conferred with mayor relative to the "Model Ordinance" for Vital Statistics.

November 17th to 18th—Cocoa—Investigated alleged insanitary conditions of City Point—Sharpes public school and reported findings in the case to the State Health Officer.

December 2nd and 3rd—Jacksonville—Attended meeting of American Public Health Association and Southern Health Exhibit in Jacksonville.

December 12th—Palatka—Called on Mr. Fearnside and several members of the city council and urged the passage of the Model Ordinance, then pending, for the reporting of Vital Statistics.

During the past year, while stationed at my headquarters I have spent considerable time in inspections of the various local dairies, and a number of alleged insanitary conditions reported directly to me; I have made microscopic examinations of hookworm specimens, and have tried in various ways to impress upon the people in my community the importance of measures for the prevention of disease. As results are sometimes slow and often discouraging, it will require some time to determine just how much good has been accomplished.

Briefly the sanitary status in the towns I have visited is as follows:

Jacksonville—All sanitary matters are under the jurisdiction of a very efficient board of health. The city is in the Registration Area of the United States and the various communicable diseases are reportable by ordinance. The city employs several physicians who make examinations of school children and their work is supplemented by nurses employed by the city.

In all respects Jacksonville has as good an administration of Public Health matters as any city of its size in the country.

Green Cove Springs—Here there is no organized health department. A city physician is employed to look after the indigent sick, but he has no authority to enforce improvements in sanitary conditions. The city is under a commission form of government and the chairman of these commissioners maintains some of the most insanitary conditions in town; namely: a horse stable near the centre of town, and a number of filthy surface privies. The Model Ordinance for the reporting of Vital Statistics has not been passed.

Palatka—This city has no board of health and no health officer; the city physician is employed by the city to look after the indigent sick, and to see to the isolation of cases of communicable diseases. The city has a sanitary committee of the council and they represent together with the balance of the council, the health organization of Palatka.

It is estimated that over half of the city is sewered, either with gravity system or cess pools, and the remainder has a poor and insanitary system of surface privies.

From last accounts the Model Ordinance was in course of passage, but up to three months ago the returns of birth and death certificates were very unsatisfactory.

St. Augustine—Here there is a board of health appointed by the council, but this board seldom meets, the whole sanitary management of the city being under the chairman of the board of health. The chairman, Dr. Underwood, has under him a sanitary inspector. At the present time the more prominent portions of the city are kept in a neat and sanitary condition, but there are a number of conditions which need improvement. The screening ordinance requiring the screening of hotels and boarding houses, fruits or vegetables exposed for sale, meat shops, privies, etc. is not enforced; the various dairies both inside and beyond the city limits are not regulated as to sanitary requirements; and no ordinance has been passed compelling owners of stables to properly dispose of the manure. Consequently the breeding of flies goes on ad libitum especially in summer time.

The Model Ordinance for Vital Statistics has been passed but it is not yet on a smoothly working basis.

At present the council has under consideration an ordinance calling for an election for the bonding of the city for a system of sewage disposal. Already, the greater portion of the city is drained by various private and individual lines of sewers.

St. Augustine has a good supply of pure artesian water.

New Augustine—Here there is no city or town organization; New Augustine being unincorporated in spite of having nearly two thousand residents.

Since the formation, last summer, of a sanitary committee about fifty per cent of the people have put in the vault system of sanitary privies. The balance have insanitary surface privies and hogs and chickens have free access to the fecal mass at the back of each privy. In New Augustine some of the more progressive people have installed individual sewerage

systems. However, they complain of the conditions by which they are surrounded.

Daytona, Kingston, Daytona Beach and Seabreeze—Seabreeze and Daytona Beach are both well sewered by individual systems and the general sanitary status is good.

Daytona is installing a system of sewage disposal which will make Daytona one of the most thoroughly sewered towns in my district. In some of the outlying portions of the city and especially in the colored section there are still many surface privies but these shall be replaced by modern sewer connections as soon as practicable.

In Kingston, an unincorporated suburb directly north of Daytona, the sanitary conditions have not been so good. For the past several years the various outbreaks of communicable diseases have had their beginning in this unhealthy section and from here have spread to Daytona, Daytona Beach and Seabreeze. Notable among such diseases are typhoid fever, diphtheria and malaria.

Daytona has no board of health but a city physician looks after the indigent sick and he does practically all the public health work in the city. He is assisted by a sanitary committee of the council.

The Model Ordinance for Vital Statistics has been adopted in Daytona and so far reports have been received promptly.

DeLand—At the time of my last visit to this city, after the smallpox cases had subsided and the stables had been cleaned up, DeLand was in a good condition from a sanitary standpoint.

DeLand is sewered mostly with cess pools and a few septic tanks, but there are still some portions which have surface privies.

The health administration of the city is carried on by a city board of health, one member of which body is a physician and is the city health officer. In addition there is a sanitary committee from the council.

DeLand is particularly wide awake in matters of disease prevention, especially since their visitation of smallpox, and the people take kindly to any recommendations for their improvement in matters of sanitation.

Titusville now has a city board of health, a health officer, and a good system of sewage disposal, about half by gravity system of sewers and one-half by fly proof bucket system privies, with concrete base for buckets.

Cocoa—Sanitary condition good excepting for the fact that there are still many surface privies in town. Also, horse stables are not regulated so as to prevent the breeding of flies.

Fort Pierce—My principal criticism here is directed towards the surface privy and the horse stables.

West Palm Beach—This city now has a good sewer system with septic tanks arranged on the unit system. The sanitary condition of the town is good and there is a hearty cooperation between the local health officer and the city officials.

West Palm Beach is the only town I have visited in my district which does not have artesian water. Here the water supply is from a fresh water lake situated west of the town.

In conclusion, I beg to submit the following recommendations to the State Board of Health. Conclusion.

1. That they urge the passage of a law, along the general line of the "Model State Law" for the collection of Vital

Statistics and Morbidity reports for all incorporated towns and cities in Florida.

2. That they urge a law regulating dairies, and stating the requirements which must be complied with.

3. That they urge a law regulating Public School sanitation, with special reference to sewage disposal.

4. As Hookworm disease is best attacked through the public schools, I would recommend that the State Board of Health be given authority by law to collect specimens from school children, failure to submit such specimen, to be sufficient to bar such pupils from attendance at schools.

5. With reference to surface privies for rural homes I recommend that the State Board of Health discontinue advocating the bucket system of sanitary privy and adopt a vault system.

The bucket system has the following objections:

1. Hinge doors at back warp or become loose or drop off.
2. Buckets get leaky or are removed by malicious boys.
3. Buckets must be emptied and this work is distasteful.

In favor of the vault system I will say it has practically the same points to commend it as has an ordinary cess pool. It is on the same principal and the vault may be attached to any surface privy and lined with bricks, concrete, plank or boards. It does not admit flies, and if a few do get in, all larvae may be destroyed by pouring a little kerosene into the pit from time to time, or a little chloride of lime. Such a privy is practically a cess pool, and like a cess pool will last a number of years before filling up. Should it fill up in a few years a new pit may be dug and the old filled in with soil. In such a privy fecal matter containing Hookworm eggs is buried and of no further danger.

6. I believe much could be accomplished if the State Board of Health and its representatives had more power in the enforcing of the various laws in relation to public health. At present the plan is this: A representative is sent to investigate an alleged insanitary condition and pass judgment on it. The people who are being annoyed by such nuisances must either endure same, regardless of how injurious such nuisance may be to their health, or else incur the enmity of their

neighbors by bringing suit against them themselves. In some sections of my district such an action would lay the complaint open to various mean acts in retaliation for a perfectly just suit at law.

7. I believe the State Board of Health should seriously consider the regulation of sewage disposal on Pullman and other railroad passenger coaches. I believe it is highly probable that cases of typhoid fever or other sewage-borne diseases may be transmitted in this way and I believe some method should be adopted by which fecal matter may be rendered harmless before it is discharged.

During the past year my relations with the State Health Officer and my various co-workers have been most pleasant and I wish here to acknowledge my appreciation of all the courtesy shown me.

Respectfully submitted,

MAURICE E. HECK, M. D.,

Assistant to the State Health Officer.

REPORT OF DR. C. H. DOBBS

Jacksonville, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to submit the following report of my activities during the year 1914 in the discharge of my duties as Assistant to the State Health Officer.

The whole of the month of January, with the exception of a few days' leave of absence, was spent in Gainesville; no reports of importance being received during the month except a notification from Dr. W. C. Young of Bronson, Florida, of the occurrence of a case of diphtheria there. Upon communicating with Dr. Young by telephone I learned that all possible precautions had been taken, including immunization of all contacts and I considered a visit to Bronson entirely unnecessary under the circumstances.

In accordance with instructions I reported in Jacksonville on February 9th for duty in the Executive Office; and since that time have remained in Jacksonville in the discharge of my regular office duties when not engaged upon special details elsewhere in the State. Aside from a number of unimportant details during February, two matters of more or less interest arose—one a smallpox outbreak at Hawthorn, and the other the discovery of a sewage pollution of the municipal water supply of Live Oak.

The Hawthorn smallpox outbreak necessitated two visits to that town, the first being spent in a general survey of conditions, and the second in vaccinating practically the whole of the colored population as well as a considerable portion of the white.

So far as I was able to ascertain there had occurred, in Hawthorn and the immediate vicinity, thirty-two cases of smallpox in a comparatively short time. During the two months following this rather extensive campaign of vaccination, and with practically no attempt at strict isolation of patients, only two new cases of the disease developed in the

immediate vicinity of the town while more than thirty cases occurred among the inhabitants of the rural districts who had refused vaccination at the time of my visit to Hawthorn.

The sewage contamination of the water supply at Live Oak proved to be a rather serious matter, necessitating a number of trips to that city during February, March and April. It was at first thought that the most probable source of contamination was a number of private sewer wells rather than the municipal sewage disposal plant. The following excerpts from my preliminary reports of this investigation will serve to give a fairly accurate description of the conditions existing at that time.

From Report for Week Ending Feb. 14, 1914:

Samples of water from Live Oak, received at the laboratory last week showed evidence of contamination but Dr. Hanson was not satisfied that they had been collected with proper care and desired that I go to Live Oak and personally collect other samples. I accordingly left Lake City Friday for Live Oak, where I met the City Engineer, Mr. L. T. Morgan, and went over the matter with him. I find that two wells are in use there, both of which are deep wells cased to a depth of 280 feet. The city has recently installed a sewerage system with septic tank the effluent from which is run into a dry well about 75 feet in depth. I think there is little probability that the effluent from this septic tank is a source of contamination to the water supply of the city. The storm water is carried off by an independent system and is run into a similar dry well of about the same depth as the one into which the effluent from the septic tank empties. As there are a number of open surface privies within the town this storm water might be a possible source of contamination but I consider this rather improbable. Many of the homes of the town are equipped with private sewerage systems, without septic tanks, the sewage being carried directly from the toilets to shallow wells varying from 50 to 100 feet in depth and it would seem that if the city water supply is actually contaminated by sewage these wells are the most probable source of the contamination. The examination of the specimens of water which I shipped to the laboratory Saturday may show that the error was in the collec-

tion of the first samples sent in. In any event, an ordinance has been passed requiring that all persons within the sewered area connect with the city sewerage system so that within a short time the use of these private wells will be discontinued and that source of danger of contamination ended.

From Report for week ending Feb. 22, 1914:

Continuing the report in regard to the examination of the water supply of Live Oak; both specimens which I sent in to the laboratory last week showed evidence of a colon bacillus contamination. As I collected these specimens with all possible care we may, I think, eliminate the question of pollution during the collection of the samples and must recognize the existence of an actual sewage contamination of the water supply of this town. As I stated in my report of February 21st., the most probable source of this contamination seems to be a number of sewage wells, varying in depth from 60 to 100 feet, though I have traced no connection between these wells and the wells furnishing the city water supply. However, there exist in this section innumerable subterranean caverns at varying depths between which there is undoubtedly either a direct or indirect communication; and the water-bearing strata are of limestones of the Vicksburg group which, as stated in the report of the United States Geological Survey, are of a porous nature deriving a considerable portion of their water from surface seepage; all of which would seem to point to the probability of such a connection. I have written Mr. L. T. Morgan, the City Engineer, stating that I would discuss the matter fully with you and would probably return to Live Oak in the near future to conduct with him a more thorough investigation of the conditions.

Further investigation of the matter (in which Mr. George Hall Hazlehurst, Sanitary Engineer of Atlanta, Georgia, was called in consultation) seemed to show conclusively that the source of contamination was the deep sewage disposal well into which is discharged the effluent from the municipal septic tank.

The following report, dated April 11, 1914, gives briefly the most essential features and conclusions brought out by this joint investigation:

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—During the past week the work at Live Oak, looking toward some final solution of the problem there, has been continued. In accordance with arrangements made Monday, I met Mr. George Hazlehurst in Live Oak, Thursday, and with him again went over the situation, gathering as much information as possible in regard to the conditions. A full report of this investigation together with recommendations for remedying the existing conditions will be rendered you by Mr. Hazlehurst. Briefly Mr. Hazlehurst's conclusions were as follows: That, if the city of Live Oak continues to use the present wells, some method of sterilization of the water and of the effluent from the city sewage disposal plant *must* be adopted, (preferably liquid chlorine for the water supply and hypochlorite of lime for the tank effluent), and that in addition to these necessary measures it would be advisable to drop a six-inch casing within the old eight-inch casing of both wells filling in between the two with cement thus insuring an impervious casing for both wells. Further investigation of the source of contamination by methods outlined in a previous report may reveal conditions which will make it advisable to seek a new water supply for this city. Mr. Hazlehurst agrees with me that it is of prime importance that the numerous private sewage wells within the city should as soon as possible be connected with the city sewerage system in order that the *whole* of the sewage from the city may be treated as above mentioned at one point. As you know, the city of Live Oak has an ordinance which is practically identical with Chapter 6443 of the Florida statutes, relating to pollution of underground waters by improper disposal of sewage but it seems that a great deal of trouble has been experienced in the enforcement of this ordinance. It would seem that if it is possible to do so it might be necessary to handle the matter through enforcement of the State law through the county authorities.

From March 1st to April 25th several details were handled, all of which were of minor importance with the exception of

three visits to Live Oak in connection with the water pollution previously mentioned.

On April 25th I was detailed to Mars, Florida to assume control of a rather serious outbreak of typhoid fever in the convict camp of the Boca Grande Investment Company. The following report of this detail was addressed to the State Health Officer under date of May 2, 1914, and was transmitted to the Governor for his consideration.

Jacksonville, Fla., May 2, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—The following is a report of my investigation of a number of cases of typhoid occurring in the convict camp of the Boca Grande Investment Company near Mars, Florida.

This camp is in charge of Messrs. J. G. Boyd, of Jacksonville and C. T. Boyd, of Mars, both of whom assisted me greatly in my work at the camp and showed a willingness to do everything which I suggested for the betterment of conditions at the camp.

A word in regard to the location of the camp and the conditions prevailing before the time of my visit might be well. The main building, within a stockade, houses all the convicts. The kitchen and mess halls, both for prisoners and guards, are also in this building. Outside the stockade are three buildings, the commissary and two guards' houses. This camp is situated about four miles from Mars and at least three miles from the nearest dwelling. The water supply was from a shallow surface well distant about 75 feet from an open surface privy used by the prisoners. At the time of my arrival at the camp it had (at the direction of Dr. S. H. Blich) been partially screened but I understand that at the time of the outbreak of typhoid the entire camp, including kitchen and mess hall, was unscreened. No milk is used at the camp except canned evaporated milk. No fresh, uncooked vegetables such as radishes, lettuce, etc., are used.

There are in the camp fifty persons—forty-two prisoners and eight guards—all white. All have been at the camp since January first of this year. The first case of typhoid occurred on March 2nd.

A thorough investigation of the conditions at the camp and of the history of the outbreak failed to reveal its source. All prisoners were questioned as to previous cases of typhoid but no history of any such case was obtained. The accuracy of these histories thus obtained is, of course, open to doubt. An examination of water from the surface well in use at the camp reveals evidence of contamination (probably *B. Coli*) but the laboratory was unable to isolate the typhoid bacillus. As previously stated, an open surface privy was in use at the time of this outbreak; but, as the drainage at the camp is in the opposite direction (toward a swamp), I do not think that the water supply need be seriously considered as a probable source of this typhoid infection. I think there is little doubt, however, that the spread of the disease in the camp after the occurrence of the first case was by flies.

Upon my arrival, I found that, while the camp had been partially screened and the drinking water was being boiled, conditions were far from what they should be. All the prisoners were sleeping in the same room, were served from the same kitchen in the same dishes. No steps had been taken at that time toward the immunization of the guards or the prisoners exposed to the infection.

The following steps were taken in the control of this epidemic, as outlined in my telegraphic reports to you. (1) Every prisoner and guard was given the first immunizing dose of Mulford Typho-bacterin. The second and third doses are to be administered at the proper intervals by Dr. Housley (a prisoner at this camp). (2) The boiling of all drinking water was continued until an examination of it could be made. Examination of a deep well at Mars showed it to be free from contamination and water for drinking purposes will hereafter be hauled to the camp from this well. (3) The whole camp was thoroughly screened. (4) The building which had been used as a commissary was emptied, thoroughly screened, and

converted into a hospital and all cases of typhoid were moved to this building and placed in charge of Dr. Housley who is in constant attendance upon them. (5) Arrangements were made for the burning of the excreta (not only from the hospital camp but also the contents of the tubs from the privy at the main camp.) (6) Separate dishes were provided for the use of the patients and these dishes, together with any other article removed from the hospital camp, are to be boiled before being taken again into the main camp. (7) After removal of patients to the hospital camp, their former sleeping quarters were thoroughly cleaned and all clothing, bedding, etc., were boiled. (8) Written instructions for the management of the camp and of these patients were furnished the captain of the guards and Dr. Housley.

In all, ten cases of typhoid have occurred—nine prisoners and one guard. When I returned to Jacksonville all the measures mentioned above had been carried out and I feel that there is little chance of any further spread of the disease. Mr. Boyd hopes to be able to secure other men to take the place of those now sick. I feel that with the camp in its present condition it will be perfectly safe to bring other men into it, perhaps safer even than taking them to some other camp where no effort has been made to guard against the spread of disease.

I regret that my investigation did not disclose the source of the disease. In the absence of any positive knowledge as to its source, I suppose we will have to fall back on the "typhoid carrier" theory to explain the introduction of the infection into the camp.

This report would be incomplete without some mention of the earnest and efficient work of Dr. Housley throughout the course of this epidemic. His constant attention has been of inestimable value and without it I think there is no doubt that at least one death would have occurred.

Mr. Boyd will keep us informed in case there are any further developments.

Very respectfully yours,

(Signed) C. H. DOBBS,

Ass't to State Health Officer.

After my return from Mars a number of matters arose, which, with the preparation of bulletins and posters on Hookworm Disease, occupied my time until June 1st, on which date I accompanied the State Health Officer from Jacksonville to Key West; remaining there until June 6th.

During June a number of cases of typhoid were reported from several of the suburbs of Jacksonville. This situation grew progressively more serious until it seemed that something more than the usual procedures would be necessary in its control. The following report and recommendations were accordingly submitted to the State Health Officer:

July 12, 1914.

Memorandum of investigation of typhoid situation in vicinity of S. A. L. shops.

In all, ten cases of typhoid have occurred in this section during the past six or eight weeks, these ten cases being distributed over an area of approximately one square mile. Four deaths have resulted.

Accompanied by Miss Attride, a nurse working under the Associated Charities, I made a thorough investigation of all these cases.

We found that the milk and water supply was varied, no two cases securing milk or water from the same source. All these cases have occurred in families of very moderate means, who use practically no fresh vegetables such as lettuce, radishes, etc., which are eaten raw. The possibility of infection from this source, which I should consider very unlikely in any case, may be disregarded. I think we may safely disregard water and milk supply.

All of the homes visited are provided with open surface privies and flies are numerous about all of them. Only one of the houses was screened and that in such a manner that it was hardly worth regarding.

Two of the cases were attending the Highway School at the time of the occurrence of the disease, but no other cases have developed among the pupils of this school and there had been no typhoid in the immediate neighborhood prior to the occurrence of these cases. I think, therefore, that we may disregard conditions at the school as a causative factor.

After a careful study of these conditions, it seems to me that this is another clear case of fly transmission.

There seems to be no hope of any great improvement in the sanitary conditions of this section and it would seem to me that the only method by which we can hope to control this outbreak is a wholesale vaccination of the people of this neighborhood. As practically all of them may be classed (under a liberal interpretation of the term) as indigent, I would suggest that we operate a sort of free dispensary on certain dates, notifying the people in this immediate section that typhoid vaccine will be administered without cost to all applying for it.

If this suggestion meets with your approval I shall make immediate arrangements to give the matter as much publicity as possible, and shall arrange places and dates for administration of the vaccine. * * * * *

These suggestions met with the approval of the State Health Officer and dispensaries for free anti-typhoid vaccinations were accordingly established and operated on Tuesdays, Thursdays and Saturdays at St. John's Park, Cummer's Mill and Lackawanna respectively during the months of July and August. On the whole a fair amount of interest was manifested and this dispensary work seemed to be productive of good results. The appended tables may be of interest, as showing the large proportion of persons who completed the three inoculations and the absence of severe or even moderately severe reactions in the great majority of cases.

During August I visited Live Oak in an attempt to secure the passage of the Model Ordinance for the Registration of Births and Deaths; but was unable to do so at that time. This city however, has since passed the ordinance.

With the exception of a visit to Live Oak to investigate several reported cases of smallpox, the whole of September was spent in Jacksonville, much of the time being devoted to the preparation of a Health Exhibit to be displayed first at the Southern Health Exhibition, held in connection with the annual meeting of the American Public Health Association, and afterwards to be used as a permanent traveling exhibit throughout the State. This work was continued during October and November, occupying practically all of my time, and the exhibit

finally completed on November 26th, was installed in the Morocco Temple.

Several diphtheria outbreaks on the outskirts of Jacksonville were investigated during these two months. None of these outbreaks were general, however, but were very easily controlled without serious development.

Practically the whole of December after the close of the annual meeting of the American Public Health Association, was spent in the preparation of additional exhibit material and in arrangements for proper packing for shipment through the State.

This exhibit, will, I think, prove a very important addition to the educational measures of the Board in its endeavor to bring to each citizen of our State the great gospel of disease prevention and sanitation.

There is submitted herewith a list of details during the past year, only the more important of which have been commented upon in this report.

Date	Place	County	Nature of Occupation
Jan. 1-30	Gainesville	Alachua	Received report of smallpox at Hawthorn, 3 cases diphtheria, 1 case scarlet fever, Gainesville; 1 case diphtheria, Bronson. Routine office work.
Feb. 1-6	Gainesville	Alachua	Conference with city health authorities regarding health conditions.
Feb. 7-10	Jacksonville	Duval	At executive office.
Feb. 11	S. Jacksonville	Duval	Investigation diphtheria in school.
Feb. 13-14	Hawthorn	Alachua	Smallpox. Vaccination 26 persons. Arrangement made for vaccination school children.
Feb. 15-16	Jacksonville	Duval	Routine office work.
Feb. 17-18	Hawthorn	Alachua	Vaccination of 54 whites and 84 negroes. Talk with mayor and city council regarding sewage disposal. Literature furnished.
Feb. 18	Gainesville	Alachua	Conference with health authorities regarding certain provisions to be incorporated in ordinances covering vital statistics, etc.
Feb. 19	Lake City	Columbia	Interview with authorities regarding collection of vital statistics.

Date	Place	County	Nature of Occupation
Feb. 20	Live Oak	Suwanee	Interview with mayor regard to passage of vital statistics ordinance. City Health Board to be established. Investigation water supply and collection of samples.
Feb. 21-26	Jacksonville	Duval	Routine office work. Water from Live Oak contaminated. Preparation of short paper on Communicable Diseases.
Feb. 27	Sanderson	Baker	Investigation reported smallpox. Diagnosed as chickenpox.
Feb. 28	Jacksonville	Duval	Routine office work.
Mar. 1	Jacksonville	Duval	Routine office work.
Mar. 2-3	Sanford	Seminole	Conference regarding diphtheria.
Mar. 4-9	Jacksonville	Duval	Routine office work.
Mar. 10-11	Live Oak	Suwanee	Investigation water contamination.
Mar. 12	Jacksonville	Duval	At executive office. Specimen water from Live Oak showed organism resembling B. Typh.
Mar. 13	Live Oak	Suwanee	Collection water specimen.
Mar. 14-20	Jacksonville	Duval	Routine office work. Investigation complaint on cesspool.
Mar. 21-23	Gainesville	Alachua	Investigation condition at fertilizer factories.
Mar. 24	Jacksonville	Duval	Routine office work.
Mar. 25	Live Oak	Suwanee	Continued investigation water contamination.
Mar. 26	Jacksonville	Duval	Visit to isolation hospital.
Mar. 27-28	Hawthorn	Alachua	Investigation smallpox. 19 vaccinated.
Mar. 29-31	Jacksonville	Duval	At office. Routine work.
Apr. 1-8	Jacksonville	Duval	Met A. C. L. train at Grand Crossing. Negroes brought in from Suwanee, suspected smallpox. Routine work, office. Investigation cesspool. Visit to isolation hospital.
Apr. 9	Live Oak	Suwanee	Investigation water pollution with sanitary engineer.
Apr. 10-16	Jacksonville	Duval	Investigation nuisance complaint. Saw case eruptive disease apparently mild smallpox. Second visit to case; mother refused vaccination, other members family vaccinated. Routine work, office. Arrangement for sanitary inspection of Fellsmere.
April 17	Orange Park	Clay	Smallpox. Brought to isolation hospital.

Date	Place	County	Nature of Occupation
Apr. 18-25	Jacksonville	Duval	Investigation reported rabid dog. Visits to isolation hospital, release of patients. Investigation case smallpox Spring Glen. Vaccination seven contacts.
Apr. 26-29	Mars Arcadia	DeSoto DeSoto	Management typhoid epidemic in convict camp.
Apr. 30	Jacksonville	Duval	Visit isolation hospital. Routine work.
May 1	Live Oak	Suwanee	Collection of water sample.
May 2	Jacksonville	Duval	Investigation 3 cases smallpox; toilet nuisance, Panama Park.
May 4	Hawthorn	Alachua	Smallpox. Vaccination.
May 5-9	Jacksonville	Duval	Routine office work. Visit isolation hospital connection with smallpox patients. Investigation sewer complaint.
May 10-12	White Springs	Hamilton	Smallpox, 8 cases. Vaccination, 78.
May 13-31	Jacksonville	Duval	Routine work, office. Preparation questions embalmers' examination. Visits isolation hospital. Assisting with embalmers' examination. Preparation hookworm bulletin. Investigation sanitary nuisances Springfield and Lackawanna Ave. Preparation hookworm poster. Investigation typhoid fever St. Johns Park.
June 1-5	Key West	Monroe	Official trip with State Health Officer.
June 7	Miami	Dade	Visit to isolation hospital. Inspection of rooms offered for laboratory.
June 8-12	Jacksonville	Duval	Routine office work. Investigation reported typhoid at Ortega, St. Johns Park and Fishwier Park. Inspection conditions near distilleries vicinity Ostrich Farm.
June 13	Macclenny	Baker	Collection water specimen.
June 13	Lake City	Columbia	Vital Statistics.
June 14	Live Oak	Suwanee	Vital Statistics.
June 15-16	Gainesville	Alachua	Vital Statistics. Met with City Board of Health.

Date	Place	County	Nature of Occupation
June 17-30	Jacksonville	Duval	Routine office work. Investigation reported typhoid near S. A. L. shops. Investigation dairy nuisance.
July 1-31	Jacksonville	Duval	Routine office work. Investigation typhoid near S. A. L. shops and St. Johns Park; preliminary arrangements for typhoid dispensaries. Typhoid case moved from store in St. Johns Park to home. Investigation report acid. fish unloaded at A. C. L. docks near Talleyrand Ave. Arrangements for typhoid dispensaries at St. Johns Park, S. A. L. shops and Cummer's Mill. Investigation complaint fertilizer factories. Investigation sanitary nuisance 19th St. Visit to Lincoln and Lackawanna section for list of owners of property where typhoid had occurred. Inspection sewer Waller St. Operation typhoid dispensary in Cummer Mill section. 58 inoculations; supply of vaccine exhausted; 36 persons turned away.
Aug. 1-8	Jacksonville	Duval	Typhoid dispensary Odom's Pharmacy, 40 inoculations. Routine office work. St. Johns Park typhoid dispensary, 21 inoculations. Cummer Mill typhoid dispensary, 52 second inoculations, 29 first inoculations; total 81. Odom's Pharmacy dispensary, 34 second inoculations, 31 first; total 65.
Aug. 10	Live Oak	Suwanee	Model ordinance vital statistics and water supply and sewage disposal.
Aug. 11-31	Jacksonville	Duval	St. Johns Park dispensary, 18 second, 12 first inoculations; total 30. Routine office work. Cummer Mill dispensary, 50 third, 35 second, 72 first inoculations; total 157. Investigation L. & N. car from New Orleans arriving without seal of U. S. Public Health Service. Odom's Pharmacy dispensary, 27 third, 32 second, 16 first inoculations; total 75. Fumigation and release L. & N. car

Date	Place	County	Nature of Occupation
			held without seal. St. Johns Park dispensary, 13 third, 10 second, 1 first inoculations; total 24. Cummer Mill dispensary, 31 third, 68 second, 17 first; total 116 inoculations. Odom's Pharmacy dispensary, 30 third, 11 second; total 41 inoculations. St. Johns Park dispensary, 16 third, 1 second; total 17 inoculations. Cummer Mill dispensary, 73 third, 15 second; total 88 inoculations.
Sept. 1-7	Jacksonville	Duval	Routine office work. Public Health Exhibit work.
Sept. 8	Live Oak	Suwanee	Smallpox. 10 cases.
Sept. 9-27	Jacksonville	Duval	Routine office work. Investigation reported rabid dog, advised to shut dog up. Second visit to observe dog.
Sept. 28-30			
Oct. 1-13	(Out of State, leave of absence).		Part time spent in Atlanta, obtaining exhibit material.
Oct. 14-19	Jacksonville	Duval	Routine office work. Investigation reported diphtheria Phoenix Park. Work on preparation public health exhibit.
Oct. 20	S. Jacksonville	Duval	Investigation reported diphtheria. Interviewed City Health Officer.
Oct. 21	Jacksonville	Duval	Routine office matters.
Oct. 21	S. Jacksonville	Duval	Arranged with City Health Officer for inspection school children connection with diphtheria situation.
Oct. 22-31	Jacksonville	Duval	Routine office matters. Continued work preparing exhibit. Release swabs 2 diphtheria cases S. Jacksonville. Inspection premises isolation hospital and arrangement made for repairs. Investigation stagnant water complaint, S. Jacksonville.
Nov. 1-20	Jacksonville	Duval	At office. Routine work. Preparation of public health exhibit. Investigation diphtheria on Kings Road. Second visit to diphtheria on Kings Road. Diphtheria Kings Road released. Preparation of hall for installation of Florida public health exhibit at Southern Health Exhibition. Installation of exhibit.

Date	Place	County	Nature of Occupation
Dec. 1-30	Jacksonville	Duval	Routine office work. Supervision of exhibit at Southern Health Exhibition. Attendance at meetings of A. P. H. A. Investigation contagious diseases outside city limits. Supervising removal of exhibit from Morocco Temple. Preparation of additional exhibit material, and arranging for crating for road travel. Preparation of blanks for obtaining pellagra data.

Respectfully submitted,

C. H. DOBBS,
Assistant to the State Health Officer.

TABULATED SUMMARY OF ANTI-TYPHOID IN-
OCULATIONS ADMINISTERED AT FREE DIS-
PENSARIES OPERATED BY THE STATE
BOARD OF HEALTH, JULY 30 TO
SEPTEMBER 10, 1914

(1) BY DATES

Date	Dispensary Location	Inoculations			
		1st	2nd	3rd	Total
July 30, 1914	Cummer's	57	0	0	57
August 1, 1914	Lackawanna	40	0	0	40
August 4, 1914	St. John's Park.....	21	0	0	21
August 6, 1914	Cummer's	29	50	0	79
August 8, 1914	Lackawanna	31	35	0	66
August 11, 1914	St. John's Park.....	12	18	0	30
August 13, 1914	Cummer's	72	34	47	153
August 15, 1914	Lackawanna	16	30	27	73
August 18, 1914	St. John's Park.....	1	10	12	23
August 20, 1914	Cummer's	17	70	32	119
August 22, 1914	Lackawanna	0	11	30	41
August 25, 1914	St. John's Park.....	0	1	16	17
August 27, 1914	Cummer's	0	15	73	88
Aug. 24 to Sept. 10	State Board of Health Bldg.	7	7	24	38
Totals	All Dispensaries.....	303	281	261	845

(2) BY LOCATION

Place	Number of Dispensary Days	Inoculations			
		1st	2nd	3rd	Total
Cummer's (Carswell's Pharmacy)	5	175	169	152	496
Lackawanna (Odum's Pharmacy)	4	87	76	57	220
St. John's Park (King's Store)	4	34	29	28	91
State Board of Health Building	17	7	7	24	38
Totals	30	303	281	261	845

(3) REACTIONS

Number Persons Inoculated	Number of Inoculations	Average Age	Reactions Reported				Total Number Reports
			"None"	"Mild"	"Moderate"	"Severe"	
303	845	21.3	477	210	51	6	744

REPORT OF DR. C. T. YOUNG

Plant City, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit herewith my report for the year 1914. Since May 1st, the date of my re-employment by the Board, I have been almost continuously engaged in campaigns or investigations. A few of these details because of some rather interesting conditions attending them, have been selected for discussion and an effort has been made to eliminate as far as possible the tediousness and repetition which characterizes sanitary reports.

Shortly after re-enlisting with the Field Service of the Board, Dr. Diggett and myself were detailed to Marion County, with Ocala as headquarters, for the purpose of conducting an educational campaign on the prevention and eradication of *hookworm*, *typhoid* and *malaria*. We were joined there by Dr. W. P. Crigler, Assistant to the State Health Officer for that District, who, when not away on regular duties, very generously cooperated with us in the prosecution of the work. In the absence of Dr. Diggett I take the liberty of submitting a brief summary of some aspects of the work, a detailed reports are already on file.

It was our plan to take the County as a unit for the work and then:

1. Show the people of that District by inspection and backed up by microscopical observation, that the *hookworm* disease was prevalent among them; review with them, both publicly and privately, its devitalizing effects; and endeavor impress upon them that it is an infection, not only curable but preventable as well.

2. To make an inspection of the schools of the populated centers, together with toilet facilities of the districts, for the purpose of ascertaining those accessible most in need of a dispensary—the “clearing house” or for this particular work.

The Hookworm
Campaign in
Marion County

The Plan.

3. To conduct an educational campaign on a number of such preventable diseases as *hookworm*, *tuberculosis*, *typhoid*, and *malaria*; to offer every person a free microscopical examination for *hookworm*, and the free treatment to those found to be infected. Information was to be given to all requesting it, when founded upon public health problems.

4. To make a special effort to correct the menace of soil pollution and sewerage borne diseases, and to impress upon all attending the importance of a wide-spread awakening to the dangers emanating from insanitary conveniences. The essentials in the construction of sanitary toilets were to be gone into, and the importance of keeping these privies in a clean and safe condition, was to be one of the goals of our efforts.

5. To secure the endorsement and support of the local medical men, newspaper editors, school teachers, and public spirited citizens, and their assistance in pushing the work into the more remote sections. Our aim was not only to treat as many cases as possible, but to so push information of a preventable nature as to minimize the percentage of future infections and re-infections.

1. The people, through wide distribution of articles in papers and magazines, were more or less familiar with the disease, but decidedly indifferent in some sections to its prevalence, and altogether too apathetic to its impoverishing effects. Dispensaries during the first few weeks were poorly attended. The schools had closed and most of, I might say practically all, the children in the rural districts were busy assisting in the gathering and packing of vegetables for market. The Results.

2. An inspection, followed by a microscopical examination, showed the disease less prevalent in towns with sanitary sewerage systems, where there were side walks, and the habit of children going barefooted less common. As was to be expected the rural districts, enjoying practically none of these advantages, showed a very high per cent of infection. The facilities in these sections had practically no sanitary, being merely places of concealment.

The educational efforts were well received by those able to reach. A great many in whom there was no trace of the infection attended the dispensary meetings,

listened to the talks, saw the demonstration, and returned later with specimens for examination. On other days they came back with friends who were equally as enthusiastic. All of the literature we had available for distribution was gladly received. Advice and information was cheerfully given to all who requested it, on any question coming under the jurisdiction of the Board.

4. As will probably always be the case, the most difficult obstacles encountered were in our efforts to put an end to soil pollution, and to convince the people of their great need of sanitary privies. Despite continued insistence, followed by the wide distribution of literature giving the fullest information, we were unable to detect any appreciable results. In many instances the bare-footed child, regardless of protests, continued to go barefooted, and the old open surface toilets still stand to the eternal menace of the neighborhood. One often wonders if there will ever arise a modern Samson, strong enough to pull down the pillars of these filthy temples of Cloaca, and free the people, in so doing, from their disease spreading activities.

5. A pleasant feature of the work was the whole-hearted cooperation given us by the medical men, editors, school teachers, and other public officials. I am quite sure that the ultimate good resulting from such campaigns as this, will come from the continued activity of these good people who live on the ground, as well as those who come after them, as doubtless many generations will pass before the subject of our campaign meets with its final accomplishment.

While engaged in looking into an epidemic of fever, I received the following telegram:

"Kissimmee, Fla., June 16, 1914.

Dr. C. T. Young,

Care San Juan Hotel, Orlando, Fla.

Come to Kissimmee on important health matters.

(Signed) Dr. M. J. Hicks, County Agent."

A conversation was held with Dr. Hicks over the phone, and it was agreed that it would be advisable to hold a public hearing in his office the next day, as it had been charged by several citizens that one of the septic tanks of the local sewer-

age system, through failure to work properly, had become a nuisance.

After some delay on the day appointed, there appeared before the doctor and myself several citizens of the town, five men and one lady, some of whom represented one of the local civic organizations. Each was given a hearing. Their complaints all centered around the declaration that one of the septic tanks had not been working satisfactorily, and that as a result the sewage was going through it unchanged; that occasionally those passing near, or living close by, were made very uncomfortable by the putrid scent, or noisome odors, emanating therefrom. It was further stated that a case of malaria had been produced in a house a block away. A report of an analysis was exhibited by a layman which showed that on June 6th "1 cc of the effluent contained 2,425,000 bacteria. Of these 10,000 appeared to be B. Coli. In the fermentation tests made by us, gas was produced by 1-10 cc of the water in lactose bile media, but no gas was produced in 1-1000 cc of the sample" (it was not stated in the report that the specimen was the effluent from a septic tank). The complainants were of the opinion that the tank should have purified the sewage, and convinced me, by their words and manners, that they thought the town had been handed a "gold brick" of no mean proportions.

It was explained to those present that the action of a septic tank was a preliminary or partial one, resulting in the liquefaction, not purification, of sewage; and that accompanying this process there was generally an odor, which at times was more or less objectionable. It was further explained that the destruction of bacteria was about as variable and spasmodic as the action of the tank itself. Attention was called to the fact that at times, when large quantities of laundry water containing bleaching powder was discharged into sewers, the tank would often be put out of commission for days, when undigested sewage would be passed through. Quite often on such occasions it would become necessary to re-inoculate the tank, in order that its septic action might be continued.

The tank, which is one of the Cameron type, is located about a half mile to the southwest of the center of the town, and

The Examination.

south of the main line of the A. C. L. R. R., and about 300 feet from the shores of Lake Tohopekaliga. It was designed by X. A. Kramer, of Magnolia, Miss. It is rectangular in shape and of the following dimensions: 6 feet deep, 20 feet wide by 47 feet long. It is of closed cement construction and is sunk about a foot beneath the surface of the ground. Sewage from the main enters the first compartment, or grit chamber, through 4 pipes and passes into the second, or digesting chamber through a system of syphons, and so on to the third chamber or discharge compartment. The sand had been recently removed from the grit chamber. According to an expert on sewage systems who had recently examined the tank, the sludge and scum were of such thickness or depth in the digestion chamber as to indicate that the plant was working properly. There was no odor about the tank or its effluent which was flowing from a break in the pipe line some 175 feet away. Samples of both affluent and effluent were collected under the usual precautions on two different occasions at about 1 p. m. In each bacteriological examination the bacterial content was greater in the effluent than the affluent. Because some of the phenomena noted were contrary to that generally expected, it occurred to me that it might be well to discuss some of them more in detail.

Septic action.

This action, as defined in the patent granted the Cameron Septic Tank Co., of Chicago, Ill., is "the process of liquefying the solid matter as contained in sewers, which consists in the secluding a pool of sewage, having a non-disturbing inflow and outflow, from light, air, and agitation until a mass of micro-organisms has been developed of a character and quantity, sufficient to liquefy the solid matter of the flowing sewage, the inflow serving to sustain the micro-organisms, and then subjecting said pool under exclusion of light and air and a non-disturbing inflow and outflow to the liquefying action of the so-cultivated micro-organisms until the solid organic matter contained in the flowing sewage is dissolved."

It is seen, therefore, that septic action is merely a decomposition, which is accomplished through bacterial agencies, with a production of gas and the breaking up and the partial liquefaction of the solid matter. This decomposition is due

almost entirely to anaerobic bacteria. It is held by the leading authorities that such a treatment of sewage should be a preliminary one to further purification, except where it is possible to discharge the septic effluent into some non-usable body of water of sufficient volume to prevent its becoming a nuisance. To many examining the clear and crystal-like effluent coming from these tanks it appears to them that the sewage has been purified, instead of being merely liquefied.

Noisome odors or disgusting stench often arise either from these tanks or the effluent leaving them. Where the moist scum is exposed they come more from it than from the sewage itself. Often the flow of the effluent from the plant is obstructed and if there remains undigested matter in suspension septic action begins again with its attending smell and a nuisance is produced which is charged against the system. The degree of odor accompanying the septic process appears to be variable, in fact some of the largest installations are free from it altogether, while about others it is decidedly objectionable. Among some of the factors which are thought to influence it are the nature of the sewage applied, the amount of minerals in the water carrier, and lastly it is a theory of one of the State's leading experts that it is due to the action of the aerobes in a disturbed pool of sewage.

Odors.

It was noted, as previously mentioned, in the Kissimmee tank examination that the bacterial content was higher in the effluent than in the applied sewage. For the reason that little seems to be known about it, I suppose, it has been rather difficult to get any reliable data on the extent to which disease organisms are destroyed in these tanks. The following from "Sewage Disposal," by Kinnicutt, Winslow and Pratt, page 144, gives a very good summary of our present information on this subject: "The opinion that septic action destroys pathogenic bacteria has been expressed by various observers. This is true only to a limited degree, and no reliance should be placed upon such an action where sewage is to be purified with a view to protecting a water supply. Of course, any process which removes suspended matter from sewage, removes to a corresponding degree the bacteria which are attached to the solid particles. The claim that septic action destroys patho-

Purification—
Bacterial

genic bacteria to a greater extent than that just mentioned is, however, based on certain theories of bacterial antagonism, which have not yet been placed on a definite basis. Furthermore most of the experimental evidence has indicated that such bacterial antagonism, if it exists at all, cannot be depended upon to any considerable extent."

Septic Efficiency

According to these experts the first test, in judging the efficiency of septic treatment, is the reduction of suspended solids, measured by direct comparison of the affluent with the effluent. Tanks located in different sections of the country show a reduction ranging all the way from 56 to 70 per cent. A rough idea of this can be gained by taking a sediment glass full of the applied sewage and comparing the precipitate which forms with that of the effluent.

Their second test is the determination of the amount of the liquefaction of the suspended solids. Assuming that the tanks effect the removal of from 50 to 70 per cent. of the suspended solids, under favorable conditions, the rate of the remainder must be ascertained. How much is stored as sludge and how much is reduced to the liquid or gaseous forms? Evidence before the English Royal Commission indicated widely varying results for the different tanks.

In conclusion, it is remarked by them, that to determine the strength of sewage as well as the efficiency of any process of sewage treatment, chemical, and occasionally bacterial examinations, are necessary. "The main purpose in any method of sewage disposal is the elimination of offensive decomposition; hence the study of putrescible organic matter by the nitrogen and oxygen consumed determinations, and by special putrescibility tests constitutes, therefore, the most important problem in sewage analyses."

Investigation of Typhoid Fever at Orlando, Fla.

The investigation of the prevalence of typhoid fever at Orlando, Fla., was made at the request of Dr. P. P. Pillans, City Health Officer, to Dr. Joseph Y. Porter, State Health Officer.

The investigation was begun June 6th, and completed on the 23d of the same month (1914). It comprised a sanitary

NOTE: The writer desires to express his appreciation of the counsel and assistance given him by Dr. Hicks in this detail.

survey of the water supply, the collection of specimens of water for bacteriological examination to determine sewage pollution, an epidemiological study of the data obtainable from the attending physicians regarding the cases of the diseases under their professional care both past and present, an inspection of the sewage system (that at present in vogue as well as that soon to be installed), of dairies, groceries, cold drink stands, restaurants, lunch stands, bakeries—in short, the study of the usual sources and avenues for the dissemination of the infection.

Omitting the discussion of the sources and means of transmission of typhoid fever, which was written merely to assist the laymen to a better understanding of the conditions confronting them, we pass at once to the epidemiological study of the infection.

There is no department of vital statistics maintained by the City Health Department. To get a record of the health of the municipality for some months past it was necessary to visit the individual physicians. These gentlemen very kindly and promptly placed the desired memoranda at my service. From them it was learned that the city had been practically free from the fever for several months until last March, during which month a lady came up from Tampa, ill with the disease. Since that time eighteen cases had developed, with one death.

Time of
Occurrence and
Extent of
Outbreak.

The average death rate for all the cities in the registration area for typhoid during 1908 was 25.8 per hundred thousand. Orlando's population was given at eight thousand; her typhoid mortality computed for the hundred thousand is 12.5.

Deducting four cases which were either brought there for hospital treatment, or contracted the malady at other places and returned to their homes before the development of the fever, we have left some fourteen cases which it is reasonably certain contracted the infection in the city. This gives us a rate of occurrence of 1 case to every 571.4 of the population; a case mortality of 7.14 per hundred. When compared to those of other districts of the registration area these ratios and averages are found to be unusually low.

With reference to the day of the month the time of occurrence or development is as follows:

March 27*.....	1 case
April 7, 15*, 16, 25.....	4 cases
May 1, 1*, 21, 23, 23, 25, 26, 27, 31.....	9 cases
June 1, 3, 11, 12*.....	4 cases
Total.....	18 cases

*Out of town cases.

The distribution of the cases according to age is interesting as well as significant. From the youngest to the oldest it is: 14, 16, 16, 17, 17, 19, 23, 25, 25, 32, 45, 49, 50 and 53 years respectively.

Those affected, it is seen, were in the active or robust period of life.

Sex and Color Here again is another rather unusual coincidence.

White		Colored	
Males	Females	Males	Females
8	2	2	2

71 per cent of the total number and 80 per cent of the whites were able-bodied men who spent their time during the day in the business section. Some of them were members of large families. In only one instance was there more than one case of the infection present in these families that was not attributable to contact.

Diagnosis. As an aid to diagnosis the Widal agglutination test was made in all instances where the drop of blood was procurable. The only exception was in the case of a young lady who refused to allow the attending physician to take the specimen; he did the next best thing and had a number of Diazo tests made. They were all positive.

The results of the Widdels for the whites were:
Positive for eight
Negative for one

For the colored:
Positive for two
Negative for two

All cases according to records were clinically positive—exhibiting the majority of the diagnostic signs and symptoms. Where negative agglutination test had been reported by the laboratory it was suggested that other specimens be secured

and that, in addition to the test for typhoid, it be made for paratyphoid A. and B. and for the colon infections.

Of the fourteen cases no data was obtainable from four of them regarding the use of milk. For the remaining ten it was: Discussion of
Epidemiology.
Milk.

Don't use it at all.....	1
Tampa milk and Westcott's.....	2
Rarely use it, source not given.....	1
Sellers, cor. Central and Parramour Sts.....	1
Malted milk, DeLaney's Drug Store.....	1
Willet's Dairy.....	1
Magruder's	1
Link's	1
Use it, source not given.....	1

An inspection of all the dairies was made in company with the Commissioner in charge of Sanitation, Mr. Clark Robinson. So far as we were able to ascertain there had not been a case of fever among the employes or upon the premises of the different dairies. Notes were taken of the sanitary conditions and some special recommendations were made to the City Commissioners regarding the improvement of the milk supply.

Of the fourteen cases practically all of them were accustomed to use ice cream and cold drinks. I am of the opinion, because of some conditions to be reported under another heading that suspicion can be attached to this practice.

Ice Cream and
Soft Drinks.

Though in general use no fault could be found with the ice. It was made from distilled water and should as a consequence be free from bacterial impurities. Careful inquiry at the plant failed to bring to light a history of any illness of an enteric nature among those who were engaged in the handling of the product. Ice.

An inspection of the business section where practically all of the cases had spent their working hours and were accustomed during this time to patronize the cold drink stands, lunch counters and restaurants convinced me that these insects were the most probable cause of the spread of the fever. The greatest number of cases had developed at a time when they were most prevalent; when the weather was unusually warm and dry; when the floating population had been reduced to a minimum, thus giving a greater condensation to the amount of infection, which generally speaking is always present. The toilets were all open surface privies placed upon alleys to the rear of the business houses. While furnished with buckets Flies.

for the collection of excrement, none of them were fly proof. About each and every one of them flies were swarming. On one of the principal alleys there were three of these privies within fifty feet of an ice cream parlor, which was insecurely screened. From one toilet, not over twenty feet away, I looked through an open window into an ice cream parlor. Pans of cream were sitting on the table ready for the freezer, flies were swarming about everywhere while a very considerable number had already begun the feast. Farther on we came to a bakery. The rear door was open. Flies were swarming about on the floor. Standing in the door eight privies were counted within a distance of two hundred feet. In this same locality complaints had been coming in that some of the cess pools had been allowed to overflow. But few of the places handling food supplies were keeping their screens closed properly, with the result that flies were noticed in all of them. Probably some typhoid carriers have been using the privies of this section which are so carelessly constructed that flies have access to the dejecta and then to the food. The pathetic typhoid story of *flies, filth, food, fever and often funeral*, in spite of its weighty accumulation of evidence, is another part of our sanitary primer which seems to fall lamentably short of an essential popular appreciation.

Contact.

One case gave a history that the disease had developed some sixteen days after another member of the family had contracted it. Association of the two had been intimate; the house was unscreened. There was no evidence that the discharges of the first patient had been properly disinfected. No precautions had been taken by those nursing the patient or handling the fomites.

Carrier Cases.

In another family it was reported that three cases of fever had developed among the different members, while living in the same house during the last six years. It is more than probable that in this household there is a carrier.

**Sanitary
Conditions.**

Of the fourteen cases:

Six lived in screened houses

Six lived in unscreened houses

One lived in a partly screened house

One gave no record

Five of these houses were connected with cess pools. Sewage.
Seven of these houses used the ordinary privy.

Two gave no data.

Of those having cess pools it was reported that two of them overflowed occasionally. They were so constructed as to prevent seepage. The excreta from typhoid cases was properly disinfected in over half of the instances; indifferently so in three and not at all in the remaining four cases.

Twelve of the fourteen cases used city water, two got their Water Supply.
supply from local pumps.

The water supply for the city is obtained from Lake Highland. This lake is located a mile to the north of the city. It is slightly oblong in outline, being narrowest at its center. It is about seven-eighths of a mile in length, from half to a quarter of a mile in width and varies in depth from a few to fifteen feet. It has no visible outlet.

Three families live on the water shed, most of which is owned by private parties. The S. A. L. Ry. runs along the north side and on the west there is a street over which quite a bit of traffic passes. The lake shore is sandy with the exception of that on the north side, which is rather mucky. At several points along the shore I noticed logs, two boats were tied to landings and at other places the tracks of domestic animals were observed.

The pumping plant is located at the southwest part of the lake. The intake pipe extends some eighty to a hundred feet from the shore. The manager of the plant tells me that he pumps from 600,000 to 1,500,000 gallons of water a day, depending upon the warmth and dryness of the season. An average pressure of fifty pounds is maintained.

At this time the water is rather low in the lake. They have had some trouble with algae and at different intervals have been compelled to give the water a treatment of copper sulphate.

Specimens of water were collected under the proper precautions and forwarded to the laboratory at Jacksonville for examination for sewage pollution. The results were as follows:

June 16, 1914.

Laboratory No. 76637, City Supply, Intake Pipe.

Laboratory No. 76640, Ice.

Two of the samples sent in by you have been examined and show no evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

June 18, 1914.

Laboratory No. 76639, Bottom of lake near intake pipe.

Sample of water submitted by you from above source has been examined and shows evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

June 20, 1914.

Laboratory No. 76638, Lake bottom, 200 ft. from boat house.

Sample of water submitted by you from above source has been examined and shows evidence of contamination.

(Signed) HENRY HANSON,
Bacteriologist.

It will be noticed that two of the samples which were collected from the bottom of the lake showed evidence of contamination. In collecting the specimens some of the sediment from the bottom of the lake had gotten into the bottles. In view of this together with the fact the contamination was thought at the time to be due to the presence of harmless acid and gas producers which are commonly found in the bottom of fresh water lakes, other specimens were collected daily and forwarded to Dr. Hanson with a request for a qualitative and quantitative estimation of the bacterial content. His reports are as follows:

June 24, 1914.

Laboratory No. 76904, Water, City Supply at Intake Pipe.

Sample of water submitted by you on June 19th has been examined and we find no evidence of sewage contamination. From the result of this examination we should judge that the water is very good. It has a low bacterial count.

(Signed) H. HANSON,
Bacteriologist.

June 29, 1914.

Laboratory No. 77021 and No. 77022, Water near Intake Pipe—City Reservoir.

The two samples of water which you sent in on the 20th and 21st have been examined and found to show evidence of sewage contamination. The water I notice is taken near the intake pipe of the City Reservoir. The bacterial count, however, is not very high.

(Signed) H. HANSON,
Bacteriologist.

July 8, 1914.

Laboratory No. 77120, Water, City Supply, Intake Pipe.

The sample of water received from you on the 26th has been studied to some extent and found to show B. Coli present in ten cc. samples.
* * * *

(Signed) H. HANSON,
Bacteriologist.

The last three reports came in after the investigation had been completed. Results had been gone over previously and it had been reasonably determined that the pollution of the water supply was a negligible factor in the prevalence of the typhoid under consideration. While this is true at present the possibility of its becoming a menace of tremendous consequence in the future is decidedly apparent. And with this thought in mind, I am amending my recommendations to the effect that the city install at no distant date a slow sand intermittent filtering plant, for the purpose of removing this irregular or inconstant source of pollution from its water supply.

In the past the sewage of Orlando has been deposited mostly in open closets, cess pools, and a few modified septic tanks. The Sanitary Commissioner estimates that there are some 250 open toilets in the city, the same number of cess pools and modified septic tanks for the use of private residences. The construction of these accessories has been mentioned previously. Depending upon the frequency of use they are cleaned from one to three times a week. The city has just installed a modern sanitary closed sewer system, a description of which is omitted for lack of space. Sewage Disposal.

1. Typhoid fever is not alarmingly present in Orlando. Conclusions.
An investigation of other towns where similar conditions obtain would probably show the infection to be present, with about the same ratio of occurrence.

2. The most probable source of the fever has been a defective sewage disposal with the flies as the transmitting agent. One case has resulted from contact, another has probably been infected by a carrier.

3. The disease shows signs of abatement. Four cases were reported this month against nine last month (May and June, 1914). The elimination of the open closet, the extermi-

nation of fly breeding places, the more rigid protection of food supplies and an enforcement of the proper disinfection of the home case will reduce the prevalence of the fever to a minimum. All these details can be worked by the city board of health.

In conclusion I desire to express my appreciation of the very generous assistance given me during the detail by Dr. P. P. Pillans, City Health Officer, Mr. Clark Robinson, City Commissioner in charge of public health and rural sanitation, the local physicians together with the newspaper men. During the entire time of the investigation these gentlemen gave me their whole-hearted cooperation.

At the request of Dr. Pillans and Mr. Clark, I appeared before the City Commissioners, reviewed with them the cause of the fever together with the agencies in its transmission, the results of the investigation conducted in their city, closing with the following recommendations:

Since eternal vigilance is the price of health, it is recommended:

1st. That the city further safeguard its water supply by the acquisition or control of the water shed. The removal of logs and muck from the shore line and some sections of the bed would very materially enhance its activities as a filter bed. The flow of surface water from the street on the west side and from the right of way of the S. A. L. Ry. should be intercepted by an embankment or wall. A bacteriological examination of the water at regular intervals is an approved method for the determination of sewage pollution. (Later in view of some later findings, I would add that the city install at an early date as practicable a modern filtration plant.)

2nd. That all open surface toilets within reach of the mains be demolished and the owner be required to install sanitary water closets. That all insanitary open privies remaining after the installation of the sewage system because of inaccessibility to mains or laterals be condemned and the owners of these accessories be required to rebuild them along sanitary lines by making them fly proof and water tight.

Cess pools should be abandoned or so constructed as to prevent seepage, and where they receive dejecta from typhoid patients disinfected with a solution of chloride of lime or carbolic acid. The substitution of a modification of septic tanks (better, Imhoff tanks) for small groups of houses which cannot be reached by sewage mains, is a better procedure.

Until some authority makes a more thorough study of the water strata, subterranean caverns and channels, it is most unwise to employ a drainage well as a means of disposal. The beneficent forces which break up sewage into harmless compounds are present only in the first few inches of the ground. The other factor, that of the enormous volume of the diluent and the practical disappearance of the sewage in that great underground sea is another subject for investigation rather than conjecture.

3rd. That the production and sale of milk should be under the rigid supervision and inspection of an experienced man. The dairymen appear as anxious as the citizens are for them, to furnish as pure a product as possible. The present and only test in vogue in Orlando, is the chemical test, that is, the determination of butter fats and total solids. This test is more useful to detect fraud, such as skimming and watering, than to give an index to the sanitary condition or cleanliness which surround the dairy in the collection and marketing of the milk. I would suggest that in addition to the chemical standard, you require both bacterial and inspection standards. All three are absolutely necessary for the successful control of the milk supply. As Rosenau has observed, "Milk is responsible for more sickness and death than perhaps all other foods combined. There are several reasons for this: (1) Bacteria grow well in milk, and therefore a slight infection may produce widespread and serious results; (2) of all foodstuffs it is the most difficult to obtain, handle and deliver in a clean, fresh and satisfactory condition; (3) it is the most readily decomposable of all our foods; (4) finally, milk is the only standard article obtained from animal sources consumed in its raw state."

4th. The continued and enthusiastic conduction of your fly campaign, the enlisting and cooperation of newspapers, clubs, ministers and public spirited citizens in the extermination of the breeding places of these winged pests, and the protection of all food and drink for direct consumption by screens so effectively maintained as to exclude their contaminating presence. These insects, through their habit of feeding and breeding often in typhoid dejecta and then walking over our food, have constituted the chief source of the dissemination and spread of typhoid in this State.

5th and lastly. In order that these recommendations regarding the water supply; the protection of the milk supply by both inspection and a thorough examination of its products; a prompt investigation of a dangerous sewage disposal; the disposal of garbage and the abolition of those conditions responsible for fly breeding; the safeguarding of food and drink; it is absolutely necessary that your health department be greatly enlarged and strengthened, and reinforced by such ordinances as are required for its successful operation. The remuneration of your City Health Officer should be more in keeping with the responsibility of the office; and such as would justify him in giving all of the many details of his work the necessary attention. Little can be demanded or expected from an official without authority, and whose compensation is so grossly inadequate to the importance of the service required. Such a department, properly maintained, could render a splendid service in its protection of the health welfare of the people.

Upon the report of a suspected case of typhoid fever or any other infectious or contagious disease he should visit the case as early as possible, assist if called upon in the diagnosis, with his laboratory facilities, and assure himself that all such measures were in force as might be demanded in the prevention of the spread of the infection. He could then turn his attention to an investigation of the source of the malady, and gather such data as an epidemiological study would require. A department of vital statistics could be maintained with the cooperation of the doctors in their prompt reporting of all cases of reportable illness, births and deaths. It would then

be possible to secure at any time reliable data on the health condition of your city for any period. A sanitary inspection should be carried on by an efficient man, trained in his work, of all places producing or handling food supplies, and of all conditions which are recognized as agencies in the production and spread of disease.

Finally, it is the duty of the health department to keep its public fully informed regarding the prevalence of disease as well as those measures which are necessary for their protection. The distribution of literature, instruction and inspection of schools, the use of newspapers and the giving of lectures for the education of the public, while inexpensive, are most efficient in the institution of protective measures and the reduction of sickness.

The study of the diphtheria situation in some sections of the State during the last few months has resulted in the accumulation of some data which I take it is not without interest to the profession in these districts as well as that in other parts of Florida.

Diphtheria.

As is generally known the product of the Mulford laboratories is placed on the market throughout the country at the following prices:

Cost of
Antitoxin.

1,000 units.....	\$ 2.00
3,000 units.....	5.00
5,000 units.....	7.50
7,500 units.....	10.00
10,000 units.....	12.00

By a special arrangement with the manufacturers antitoxin is furnished free to the indigent in Florida. A special rate is given the State and the druggist handling the transaction is allowed 10 per cent of the cost price to the Board. Both the doctor and the druggist are required to certify that the patient is indigent and the doctor, in addition, that he has received no compensation for his services. Many unwilling to acknowledge, because of a pardonable pride, their limited means, or endure the opprobrium which they imagine is heaped upon a recipient of charity, often undergo a very considerable personal sacrifice in order that they might secure the remedy by other means. The general public pays the regular price.

In several of the Southern States an arrangement has been perfected with a certain laboratory, turning out this specific whereby it can be furnished to all alike at greatly reduced prices. The man who does not wish to be considered a pauper can secure it at a figure that is not prohibitive and his neighbor, who is in better circumstances is relieved of the feeling that he has been "held up" every time he buys a package of the product. The contract made in these sections has reduced the retail price 74 per cent, and still allows a net profit of 10 per cent to the dealer. The system has been tried out for over two years, and has been found to work very satisfactorily. The reduced prices secured through the plan are as follows:

1,000 units.....	\$.50
3,000 units.....	1.35
5,000 units.....	1.95
7,500 units.....	3.00
10,000 units.....	3.98

The cost to the manufacturer according to Dr. J. J. Kenyoun, A. M. A. Journal, Vol. LXIII, No. 10, p. 862, in his own language is, "A careful estimate of the cost per thousand units, just after the precipitating method was introduced, showed that it ran from 6½ to 8¼ cents." By estimating the serum at 8 cents per thousand units and the cost of the package or container at fifteen cents, we have the following:

1,000 units.....	\$.22
3,000 units.....	.39
5,000 units.....	.55
7,500 units.....	.75
10,000 units.....	.95

Comparison of
Tabulated
Results.

1,000 units cost in Florida,	\$ 2.00	Other States, \$.50,	Manufrs. \$.22
3,000 units cost in Florida,	5.00	Other States, 1.35,	Manufrs. .39
5,000 units cost in Florida,	7.50	Other States, 1.95,	Manufrs. .55
7,500 units cost in Florida	10.00	Other States, 3.00,	Manufrs. .75
10,000 units cost in Florida,	12.00	Other States, 3.98,	Manufrs. .95

Diagnosis.

While in some respects it is highly complimentary to the Board to observe the rather implicit confidence which some members of the profession have in the findings of the laboratory, yet this is most deplorable when upon investigation it is seen that in some instances the very careful and painstaking examination of the patient has been supplanted by a mere mechanical procedure, that of collecting specimens and send-

ing them off for a diagnosis. The ability to examine, consider and interpret and last but not least, act promptly has been surrendered to the scientist who sits on a stool, surrounded by microscopes, aniline dyes and culture media in a distant laboratory. Positive reports from such a trained and skilled observer furnishes in rather a pleasant way the key to the particular variety of remedial agents to be employed; but when reports of a negative or a doubtful nature are received from this specialist by our dependent brother who has fallen into the habit of disregarding bedside study, he begins to flounder in uncertainty and confusion and commences shortly a series of shot gun medications in a rather vain hope of relieving his patient.

Recently some serious mistakes have been made by the failure to disregard negative reports despite the presence of suspicious clinical indications. The efficacy of antitoxin is due largely to its early administration as well as the size of the dose employed. Again, because of a delayed mail service together with the time necessary in the laboratory for the cultural growth and examination, often two or three days have elapsed before the report is in hand. In the meantime a malignant case would have either died or drifted beyond hope.

A better plan for those not within easy reach of the bacteriologist from whom reports from swabs and cultures can be secured without much loss of time would be in all cases of throat trouble of a doubtful or a suspicious nature (and I might remark as is well known, that many of the most innocent appearance often are found upon a bacteriological investigation to be diphtheria) to give at once a dose of antitoxin of sufficient size and then take the swab and mail it to the laboratory. If it is diphtheria, the case will be well on the road to recovery when the report is received.

A plan is being tried out which has for its purpose the elimination of all unnecessary delays in the examination of swabs for this disease. With the cooperation of the local health officers and the field men it is planned to review with the local physicians in certain sections the technique required in the inoculation of tubes of blood serum at the bedside of the patient. It will often be possible when atmospheric tempera-

ture is favorable and a sufficient time has elapsed during transit to examine these specimens immediately upon their arrival and wire the results to the attending physician. It is estimated that from 18 to 36 hours will be saved by the successful operation of the plan.

Size Dosage.

Dr. W. M. Park states that only a single dose is required and so far as the mortality is concerned that it has given better results. He recommends 5,000 units for mild, 10,000 units for severe and 20,000 units for malignant cases. According to him it takes two days for one-third of the dose to be absorbed and another two days for the other one-third. After twelve hours there is little toxin in the body except possibly locally in the tissues. It is further stated that 10,000 units intravenously is worth 100,000 subcutaneously, and that by repeated tests it has been ascertained that doses ranging from 5,000 to 25,000 are of sufficient size; that 40,000 units will save any patient that 1,000,000 will. (Same issue Journal, page 863).

Schick Reaction.

In the publication of articles and their conversation about the streets too much publicity has been given to the subject of anaphylaxis and serum sickness among the laity by medical men. This almost negligible factor has come to be regarded in some neighborhoods as an invariable sequence to the administration of antitoxin. Only last week the writer saw a mother let her child go almost to death's door because she had heard that antitoxin had caused the death of the child of a friend living nearby. An investigation of the rumor showed that it was but an idle gossip. In view of this apprehension which exists together with the cost of the immunizing dose of antitoxin as well as the fact that such a dose is often unnecessary because of the presence in the individual already of a sufficient number of antibodies to protect him, it is thought that it would be wise for the Board to introduce and advocate as widely as possible the use of the Schick test as a preliminary procedure to the prophylactic administration of antitoxin.

Briefly, the test consists in the injection superficially into the skin 1-50 of the dose of diphtheria toxin fatal to a guinea pig. The reaction occurs generally under 48 hours and consists of a local redness and infiltration which on subsiding leaves pigmentation and scaling. Positive results do not indi-

cate with the same degree of certainty the absence of protective bodies since some individuals show the reaction in spite of the presence of these bodies. A negative result, however, always indicates the presence of protective bodies in sufficient amount to protect the individual. It is seen therefore, that by its use it is possible to eliminate all unnecessary doses of antitoxin for immunizing purposes and at the same time determine definitely those in whom it is required.

Schick's observations indicate that immunity to diphtheria exists at birth in about 80 per cent, reaches 50 per cent at one year and falls to 40 per cent at from two to five years of age and rises to 90 per cent in adults.

Through its employment the New York State Department of Health has determined that the immunity resulting from 1,000 units of antitoxin lasts from twenty-one to twenty-eight days; that from a second dose of the same number of units, only about a week; and finally that the immunity conferred by an attack of diphtheria is of short duration.

The following sets forth in detail my activities from April 1st (time of my appointment) to December 31st, 1914:

Date	Place	County	Nature of Occupation
April 1-5	Jacksonville	Duval	Conference regarding hookworm campaign.
April 6-30	Ocala Dunnellon Bellevue Citra Anthony McIntosh Fort McCoy Stokes Ferry Silver Springs	Marion Marion Marion Marion Marion Marion Marion Marion Marion	Preliminary publicity, hookworm campaign. Distribution of specimen outfits and inspecting schools; collection and examination of hookworm specimens; interview with physicians and public-spirited citizens in soliciting cooperation for campaign; talks regarding sanitary aspect of the work in these sections and endeavoring to enlist the support of the community for dispensaries.
May 1-10	Various places	Marion	Hookworm dispensaries.
May 11, 19, 25	McIntosh	Marion	Hookworm Dispensary.
May 12, 19, 26	Citra	Marion	Hookworm Dispensary.
May 22, 29	Bellevue	Marion	Hookworm Dispensary.
May 16, 23, 30	Dunnellon Sparr	Marion Marion	Hookworm Dispensary. Hookworm Dispensary.
June 1-7	Ocala	Marion	Headquarters during hookworm campaign.
June 4	Citra	Marion	Hookworm Dispensary.
June 5	Bellevue	Marion	Hookworm Dispensary.

Date	Place	County	Nature of Occupation
June 8-23	Orlando	Orange	Investigation typhoid fever.
June 17	Kissimmee	Osceola	Investigation sewerage problem.
June 19	Apopka	Orange	Investigation typhoid fever.
June 23	Kissimmee	Osceola	Collecting sewerage for examination.
June 23	Tampa	Hillsboro	At Tampa laboratory.
June 25	Orlando	Orange	Final inspection typhoid situation.
June 28	Lakeland	Polk	Personal inquiries among physicians regarding prevalence of typhoid.
June 30	Plant City and Alafia	Hillsboro	Investigation family suffering from smallpox and two white families infected with typhoid.
July 2	Vicinity of Plant City	Hillsboro	Visit cases typhoid. Sanitary advice given.
July 6	Kissimmee	Osceola	Collection sewage samples. Inspection of system together with a hearing of complaints.
July 8	Vicinity of Plant City	Hillsboro	Visited typhoid cases accompanied by attending physician. Assisted in an inspection of premises. Advised institution of usual preventive measures.
July 9	Turkey Creek	Hillsboro	Saw case pellagra with family physician.
July 12	Seffner	Hillsboro	Visited colored typhoid cases in country. Made study of case and gave usual advice.
July 12-15	Tampa	Hillsboro	Acting upon instructions of State Health Officer, reported to laboratory at Tampa for duty relieving chief bacteriologist and ass't bacteriologist during their vacations respectively.
Aug. 1-21	Tampa	Hillsboro	Assisting with bacteriological work in laboratory.
Aug. 23-31	New Orleans, La.		Detailed New Orleans for study of plague and plague operations.
Aug. 23	New Orleans, La.		Morning: Post mortem inspection of two suspected cases followed by an autopsy.
Aug. 24	New Orleans, La.		Attended conference of P. H. S. officers on the management of their campaign. Inspection, dissection and examination of rats for plague. Afternoon: Visit to plague hospital. Review of history and examination and inspection of clinical cases. Laboratory rat work.
Aug. 25	New Orleans, La.		Morning: Routine laboratory work. Evening: The same.
Aug. 26	New Orleans, La.		Morning: Inspection of carbon-monoxide fumigation of vessels for rats under service of Dr. Roberts. Evening: Inspection of unloading cargoes of bananas and loading of same on rat-proof cars.

Date	Place	County	Nature of Occupation
Aug. 27	New Orleans, La.		Morning: Routine rat work at the laboratory. Later: Conference with Drs. Rucker and Corput, managers of United Fruit Company's and competing companies regarding the certifying of shipment of bananas from rat-free vessels in rat-proof cars to Florida; and the agreement that these cars would not be reopened during the remaining of their stay in the city. Afternoon: Visited plague hospital to see new cases.
Aug. 28	New Orleans, La.		Morning: Routine rat work at laboratory. Afternoon: Inspection of rat-proofing accompanied by Dr. Creel.
Aug. 29	New Orleans, La.		Morning: Accompanied by Dr. DeVallin inspected several city blocks with view of studying the system of rat-proofing and methods adopted for the different buildings and the various kinds of construction. Afternoon: Routine laboratory work. Visit with Dr. Dowling of Louisiana State Board of Health.
Aug. 30	New Orleans, La.		Morning: Routine laboratory work.
Aug. 31	New Orleans, La.		Inspection of outgoing railway freight and manner of rat-proofing and certifying to of car under Dr. Corput. Autopsy at City Morgue. Spent half day in the district of Dr. DeVallin inspecting methods used to catch rats, kinds of traps, location, bating, system of collecting, tagging and forwarding to laboratory. Visited Charity Hospital and Turo Hospital. Went to Plague Hospital again to see new case.
Sept. 1	New Orleans, La.		Morning: Inspected the municipal filtration and treatment, municipal water plant of City of New Orleans. Afternoon: Routine laboratory work.
Sept. 3	Jacksonville	Duval	At executive office. Report to State Health Officer.
Sept. 4	Tampa	Hillsboro	Conference with Mayor over plague situation. Resumed duties in Tampa Laboratory.
Sept. 4-30	Tampa	Hillsboro	On duty at laboratory in Tampa. Assisting the bacteriologist in charge. Service routine.

Date	Place	County	Nature of Occupation
Oct. 1-31	Tampa	Hillsboro	Daily routine laboratory work. Rat examinations. Record of species and places where trapped. Dissection and search for microscopic evidences of plague. Staining specimens from glands, liver and spleen of suspects, followed later by guinea pig inoculation with these same tissues when warranted by evidence of positive or inconclusive nature. Special study of diphtheria. Average period of detention for the infected. Measures employed by the practitioners to free the throats, etc., of the bacillus with view to ascertaining the more effective of these agents. Checked letters on mail service. Observations on time consumed in getting out reports to men who send swabs from a distance and advisability of inaugurating a special outfit containing a tube of blood serum which could be inoculated at the bedside and make it possible thereby for these men to get reports from 36 to 24 hours earlier. Studies of the benefits to be derived from the use of Schicks test preceding the prophylactic administration of antitoxin. Morphological and cultural characteristics of Klebs-Loeffler bacillus.
Nov. 1-7	Tampa	Hillsboro	Routine duties in laboratory. Daily examination of rats submitted by the city. Continued observations on different phases of diphtheria situation, diagnosis, treatment and quarantine methods employed by the different medical men of the city. Recommendations regarding the furnishing of the health officers in three different towns with tubes of blood serum for bedside inoculation with view to testing the advisability of inaugurating special diphtheria container and placing it in the hands of those previously instructed as to the technique for its successful operation.
Nov. 7-13	Richmond, Va.		Attending Southern Medical Ass'n at own expense. Special permission from State Health Officer.
Nov. 13-25	Tampa	Hillsboro	Special detail, Tampa laboratory.
Nov. 27-30	Jacksonville	Duval	Assisting those in charge of State Board of Health Exhibit in the Southern Health Exhibition at Morocco Temple.

Date	Place	County	Nature of Occupation
Dec. 1-4	Jacksonville	Duval	Attending sessions of American Public Health Association. Assisting those in charge of Board of Health Exhibit.
Dec. 5-10	Jacksonville	Duval	Assisting with exhibit, and at close of Southern Health Exhibition, the packing and crating of the Florida exhibit, and such other details necessary to put in proper shape for road duty.
Dec. 17	Plant City	Hillsboro	Visit case typhoid near Plant City with attending physician.
Dec. 22	Lakeland	Polk	Consultation with attending physician over severe case diphtheria. Family opposing administration of diphtheria antitoxin.
Dec. 27	Plant City	Hillsboro	Consultation with attending physician severe case scarlet fever.
Dec. 28-29	Plant City	Hillsboro	Visit to all local physicians and collection of back birth certificates.

Very respectfully,

C. T. YOUNG,

Assistant to the State Health Officer.

REPORT OF DR. JAMES M. JACKSON

AGENT OF THE STATE BOARD OF HEALTH

Miami, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—It becomes my duty to again report to you concisely the work of your agent for Dade County for the past twelve months. During the year we have had only one case of smallpox. That was in a white girl who came here early in January. This case was removed to the Isolation Hospital, but the girl became so alarmed and worked up that she left in a few hours, returning to her home in the north end of town. I immediately visited her and found that it was impossible to induce her to return to the Isolation Hospital. I therefore posted the house and warned the family against leaving the house or allowing anyone to enter same until the entire family was vaccinated. The case did splendidly and there was no spread.

There has been from time to time a case of diphtheria, particularly in Miami, but these cases have been so far between that it has been impossible to trace any connection between them.

During the summer we had no dengue and but a few cases of malaria. Typhoid cases were very rare and only a very few occurred during the entire year. The time of your agent has been largely spent in endeavoring to educate the people along sanitary lines, giving careful audiences to all complaints made and sound sanitary advice to all individuals. During the month of August, with your permission as you know, I visited New Orleans for three weeks and there observed the manner of eradicating rats and plague.

After I returned home I made an address before the Miami Board of Trade and gave one or two interviews to the newspapers and urged upon the people the eradication of rats from an economical as well as a sanitary standpoint. This has been fruitful of some results, but not, to the extent that I had hoped.

During the year the Model Vital Statistics ordinance has been passed by the City of Miami and also the City of Ft. Lauderdale, both cities being in my territory. As most of the physicians in my territory live or work in one or the other of these cities, I trust that the fact that they have to report within the cities will induce them to become more prompt in reporting births within the country.

During the year the Miami City Board of Health has been organized and your agent was honored with the presidency of same. The Board has done a great deal of work along proper sanitary educational lines, the adoption and carrying out of a model milk ordinance, screening ordinance for restaurants and fruit stands, inspection of markets and bakeries and many other important ordinances have been passed by the city upon our recommendation. We have endeavored to carry out a campaign of education; for, as you too well know, sanitary laws without proper education of the public as to their needs and necessities are very poor things, but when the public is aroused it is a very easy matter to receive proper ordinances and see that these laws are properly carried out.

I wish to congratulate you upon the high character of your HEALTH NOTES and also upon the fact that I find they are largely read and consulted by the laity as matters of education in sanitation and it has done and is doing much toward the proper sanitary education of the laity of the State and particularly in Dade County. I also think that your health bulletins in the press have been most helpful. It has been a source of great pleasure to your agent and the City Board of Health to note the splendid support that sanitation in general and the organization of the City Board of Health and its rules and regulations have received from the press of our city, as there is no better educator than the daily press.

I have visited from time to time, as time would permit, some of the smaller places within my territory and have endeavored to preach—not in a lecture, for I am not a public speaker—by personal interviews with members of the community the need of proper sanitation.

All in all this has been a most excellent year for Dade County, but I feel that it is only the beginning of what can be

done with the proper backing and support to improve the health and educate the people in sanitary science.

Respectfully yours,

JAMES M. JACKSON.

Agent of the State Board of Health.

REPORT OF DR. D. G. HUMPHREYS,

AGENT OF THE STATE BOARD OF HEALTH.

Fernandina, Florida, January 1, 1915.

DR. J. Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—I herewith submit my annual report for 1914.

Nassau County has enjoyed another year of unusual good health, not a single case of diphtheria, scarlet fever, dengue fever or smallpox has been reported. There was less malaria, and of a milder type, than I have known for the past fifteen years, and while mosquitoes were unusually severe, they were mostly of a non-malarial type, and in Fernandina proper the houses are almost uniformly screened.

This mosquito question was gone into very thoroughly by the City Health authorities, and while the local cess pools, cisterns, water barrels, etc. were taken care of, no comprehensive plan was found for drainage or oiling on account of the large acreage to be covered. This matter is still being pushed, and I feel sure a solution will be found before next summer.

There were only five cases of typhoid fever, three of these being traceable to water contamination, the other two from sources unknown. Every precaution was taken in each case, each being screened and vaccine given to other members of the family and neighbors, when possible. Typhoid fever is growing less frequent each year in this county, due, I think, to the realization of our people to the important part played in the carrying of the disease by the house fly, and where formerly typho bacterine was sorely dreaded, now it is eagerly sought when a single case appears.

Tuberculosis, as I have stated in my former reports, is principally confined to the colored race. Only ten deaths occurred from this disease during the year. I think the new work taken up along this line is sure to accomplish great good, for our people are now ready for instruction.

There were only three cases of pellagra, one death and two recoveries.

As I stated in my last annual report, I thought the hook-worm was about cornered, but on my round of inspection this summer, I found a whole community in the western part of the county infected, but they readily agreed to treatment, with a very happy result.

The City Council of Fernandina and Dr. J. L. Horsey, City Health Officer, have co-operated most heartily with the State Board in general health matters, and especially in the catching and examination of rats so caught for plague infection, and in every way have given assistance to the comprehensive vital statistic plan, realizing what its perfection would mean to the State of Florida.

I made a round of inspection of the county during the months of June and September. I found Fernandina's sanitary condition good, with the best sewerage system, clean streets and plenty of pure artesian water. There remains the mosquito alone to be conquered, when it will be an ideal spot to live.

Callahan, Hilliard and the smaller towns are being drained and more attention being paid to sanitation each year.

I have very little specific work to report, because there were no quarantinable diseases, but I gave advice when needed and helped when possible in every health matter.

Respectfully,

D. G. HUMPHREYS,

Agent of the State Board of Health.

REPORT OF DR. RAYMOND C. TURCK

**SURGEON IN CHARGE OF THE WORK UNDER THE
"CRIPPLED CHILDREN" ACT**

REPORT OF DR. RAYMOND C. TURCK

SURGEON IN CHARGE OF THE WORK UNDER THE "CRIPPLED CHILDREN" ACT.

Jacksonville, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Florida.

DEAR DOCTOR:—In accordance with your instructions I beg to submit the following report of the surgical and orthopedic work done under the direction of the State Board of Health during the year 1914.

Fifty-one cases were handled during the year, as follows:

Remaining under treatment from 1913.....	13
Admitted for treatment during 1914.....	15
Examined or admitted but discharged because of lack of facilities for treatment	23
<hr/>	<hr/>
Total	51
There were forty-six white and five colored children.	
Discharged cured during 1914.....	9
Discharged, improved, treatment incomplete because of inadequate equipment	7
Under observation or office treatment January 1915.....	3
There are in hospital at this date nine cases presenting the following conditions:	
Lateral curvature of spine, R. W.....	1
Tuberculosis of spine, A. N.....	1
Tuberculosis of hip, F. P.....	1
Osteomyelitis of femur, P. G.....	1
Osteomyelitis of tibia, A. F. D. S.....	2
Osteomyelitis of humerus, L. W.....	1
Spastic Hemiplegia, E. A.....	1
Talipes Equinovarus, U. K.....	1
The following pathologic conditions were presented:	
Poliomyelitis demormity and paralysis.....	8
Spastic Paralysis.....	9
(Hemiplegia 2; Diplegia 4; Paraplegia 3)	
Congenital Syphilis.....	5
Hare Lip and Cleft Palate.....	1
Tuberculosis of hip.....	6
Tuberculosis of knee.....	1
Tuberculosis of spine (Pott's Disease).....	3
Osteomyelitis	5
(Femur 2; Tibia 2; Humerus 1)	
Talipes Equinovarus.....	15
Talipes Equinus.....	1
Lateral curvature of spine.....	6
Muscular Dystrophy.....	3
Abscess of thigh.....	1
Multiple Arthritis.....	1

I beg to especially call your attention to the fact that of the thirty-eight new cases received during the year, but fifteen were admitted for treatment, while twenty-three were returned to their homes untreated and unimproved because we are not provided with the necessary equipment and trained workers to properly treat, or train, or educate non-operative types of orthopedic cases. Of the twenty-eight cases actually treated during the past year seven were sent home but partly cured; again because we did not possess facilities for following up our operative correction. So many of our cases present deformity due to some form of paralysis, that even after successful operative correction, it is necessary to institute gymnastics, exercises, joint manipulation, muscle training, etc., to develop the greatest possible function, as well as to prevent a recurrence of the deformity.

Cases not admitted because of lack of equipment.

In view of the fact that we do not possess the equipment necessary for developmental or educational treatment, in accordance with the instructions of the State Health Officer, I have recommended for admission only such cases as seemed amenable to reasonably prompt operative cure.

Including the cases recorded in the State work, I have records of more than fifty children in Florida who need, at the present time, institutional treatment for paralytic or other deformity or disability not curative by surgical operation alone, and these certainly form but a small percentage of the total number of crippled children in the state. It is unfortunate that the parents of most of the crippled children are unable to provide means to give the children the necessary developmental or corrective treatment, which in case of a spastic paralytic, for instance, is likely to cover a period of years. No properly equipped institution being provided by the State of Florida, and the parents being unable to afford the expense of keeping the children in a foreign institution, many children are therefore rapidly growing into incurability and a life-long helplessness, mentally as well as physically.

We need a ward or hospital completely equipped with a gymnasium, a kindergarten, a manual training workshop, a sun parlor and a play room. Many of the children, while incurable so far as a complete restoration to full physical vigor is

Need for orthopedic ward in hospital.

concerned, yet might be made into self-sustaining, useful citizens if they had half a chance. Crippled children are almost invariably industrious, anxious to learn, anxious to do things or make things, and almost always are of sunny disposition and easily managed. Because of their disabilities many cannot attend school, parents do not seem to think it necessary or are unable to teach them at home, their mental education is almost always neglected, and certainly effort is but seldom made to teach them useful self-sustaining occupations.

School work and manual training.

While the bodily ills of such children are being remedied or minimized, and while they are being developed physically, they should receive at least the rudiments of mental education; kindergarten and primary school work would be but a pleasure and a pastime for them, and at the same time they should have occupational training.

In Germany crippled boys are taught forty-nine different trades or occupations, and the girls twenty-six. With this range it is always possible to find some work that is adapted to the particular need or ability of the individual. It is manifestly impossible to give the required gymnastic training, manual training or kindergarten or primary school work in any general hospital. A special ward or institution is necessary not only to provide the necessary equipment but that the work, exercises, rest periods, etc., may be properly regulated.

Ward in connection with St. Luke's Hospital.

In my report of the work for the year 1913 I suggested that a ward be erected in connection with St. Luke's Hospital in Jacksonville. Sketches of the proposed building and plans were submitted. Such a ward could be built and equipped for twenty thousand dollars, which is the amount already appropriated by the state legislature for this purpose. The suggested ward would contain eighteen beds for white children and six beds for colored children. Arrangements might be made with St. Luke's to maintain such a ward, provide nursing and general care; the State paying weekly or monthly a specified amount for each child treated; the general expense of the ward being paid by the hospital.

It would be necessary, however, for the State to provide a few special workers. We would need one operator for massage and gymnastics, preferably a woman trained in one

of the large orthopedic hospitals. We should have a kindergarten teacher who could also handle primary school work and manual training for girls. In addition, we should have a man to handle the manual training work shop, preferably one graduated from a school of good standing and who understands something of the necessary adaptation of trades or occupations to the capability of the individual.

The additional expense to the State in maintaining such a ward would be in repairs to the building and in salaries of the above mentioned special operators.

The ideal solution of the problem of the proper care and treatment of the indigent crippled children of the State of Florida would be a separate hospital building, maintained by the State of Florida. Such an institution could be erected and equipped for not more than fifty thousand dollars and would be sufficient for a number of years to come. It could be built so that it could be enlarged from time to time if necessity should arise. While an orthopedic hospital requires a few specialized operators, yet it can be managed economically because but few nurses are needed. One good nurse with a couple of colored maids can handle a ward of twenty children. No nurses' training school and no large force of nurses would be required. Such an institution caring for fifty children could be maintained for from twenty to twenty-five thousand dollars a year, which would be about the same or a little less than the rate per patient which the State is paying for its children under present conditions.

Separate State
Orthopedic
Hospital.

Should the Board care to consider such a hospital, and should they wish to try to get the necessary appropriation from the state legislature, I would be glad to work out preliminary plans of such a building together with an estimation of the cost of maintenance.

In this connection I may say that in casual conversation with some members of the present legislature, they have in every instance shown a keen interest in the work and have suggested that a bill appropriating money for the erection and maintenance of such an institution be drawn up and submitted to the next legislature.

A state hospital for ruptured and crippled children could

be made, in part, self-sustaining if rooms were provided for patients who were able to pay for hospital care. I have on my records at present a considerable number of children whose parents are able and would be glad to pay for hospital treatment if such an institution were available.

I desire to say that the general care and treatment received by these children in St. Luke's Hospital has been most satisfactory. While we have been unable because of lack of facilities to give them specialized treatment or training, yet every effort has been made not only to improve their actual physical condition but to make them as happy as possible. Practically without exception the children have improved very markedly in general health while at St. Luke's, even those sent out but partially cured have shown astonishing improvement in their general condition.

I desire also to especially mention my appreciation of the excellent care given the colored patients by Miss Oliver Webster, Superintendent of Brewster Hospital. While we have had but few colored cases, yet results have been invariably satisfactory.

I desire to express my appreciation of the constant help and cooperation given by the State Health Officer. His interest has made the work a pleasure.

I also wish to acknowledge the efficient and conscientious work of my associate, Dr. William Buffalow. Members of the visiting staff of St. Luke's Hospital have also cheerfully given their services whenever called upon; Drs. W. E. Ross and J. D. Love of the children's service, Drs. W. S. Manning and Norman Heggie of the eye, ear and nose service, Dr. J. H. Randolph of the nervous and mental service have especially rendered valuable aid.

Dr. L. W. Cunningham has taken the necessary X-ray pictures. He has done the work practically at cost, and his interpretation of the plates has been of substantial assistance.

Respectfully submitted,

RAYMOND C. TURCK.

Care in
St. Luke's
Hospital.

Case Histories.

In general, the actual work done during the past year has been satisfactory. Nine patients have been returned to their

homes cured. These include one case of abscess of thigh, one case of talipes equinus, one case of hare lip, two cases of joint tuberculosis and four cases of talipes equinovarus. Of the patients returned home partly cured, there were two cases of disability following Pott's disease of the spine, one of poliomyelitis, one of spastic hemiplegia, and three cases of muscular dystrophy. Twelve cases are now under treatment.

The following are brief histories of the cases treated (not including those examined and returned) during the year 1914:

CASE 1. P. A., white male, age four years, Greenville, Florida. Referred by Dr. J. F. Mixson. Admitted to St. Luke's December 1913 with tuberculosis of the right knee and ankle. Right knee flexed at an angle of 45 degrees. Treated by extension-traction, plaster casts, etc., until June 21, 1914, when he was returned to his home greatly improved in health and strength and with the local process apparently arrested.

CASE 2. R. L., white male, age ten years, Jacksonville, Florida. Admitted to St. Luke's in July 1913 with tuberculosis of right hip joint. Treated by extension-traction and plaster casts. Discharged apparently cured June 26, 1914.

CASE 3. C. K., white male, age six years, Fenholloway, Florida. Referred by J. H. McCullers. Admitted to St. Luke's October 22, 1913 with double club foot, neglected type. Operation St. Luke's Hospital October 28, 1913. Treated until March 8, 1914, when he was returned to his home cured with feet in excellent condition. Function restored.

CASE 4. B. S., colored male, age three years, Jacksonville, Florida. First operation in Brewster Hospital January 1913. Under treatment with casts and braces until May 21st, 1913, when case was lost from observation. Feet neglected by parents with consequent relapse to former condition. Second operation Brewster Hospital October 27, 1913. Resection of bones of both feet. Treated in casts and braces until March 8, 1914, when the case was discharged cured. Position and function restored.

CASE 5. J. P., colored male, age two years, Jacksonville, Florida. Admitted to Brewster Hospital October 25, 1913 with double club foot. Operation October 27, 1913 on tendons and bones of both feet. Treated in plaster casts and adhesive dressings until April 1914. Discharged wearing braced shoes; position and function restored.

CASE 6. V. A., white male, age seven years, Christina, Florida. Referred by Dr. C. C. Pearce. Flexion contracture of both thighs and legs and lateral curvature of spine. Full history in twenty-fifth annual report for 1913. Treatment continued until July 1914, when the child was returned home in excellent general condition, able to walk erect slowly without support. This child should have had further treatment and training, which we are unable to give because of lack of gymnasium and manual training, work shop.

CASE 7. F. P., white female, age ten years, Jacksonville, Florida. Admitted to St. Luke's Hospital October 1913 with tuberculosis of the left hip joint of five years' duration. Patient was treated in extension-traction until February 26, 1914, when first operation was done on joint. At this time it was found that the head of the bone was entirely destroyed. The diseased bone was removed and the limb placed in lateral plaster splint in abduction. Drainage was very free; wound refused to heal. Secondary

operations, removing more diseased bone, were done April 28, 1914 and October 8, 1914. The wound is still draining but there is a marked improvement in the local condition and the child has improved decidedly in general health and strength. She is still under treatment and after the disease has been arrested an arthroplasty will be done to provide a hip joint.

CASE 8. A. F., white female, age thirteen years, Greenville, Florida. Referred by Dr. J. F. Mixson. Extensive ulceration of both legs, with osteomyelitis and periostitis. This patient has been under treatment since October 18, 1913. Two operations have been done; the ulcers and diseased bone areas have been cleared out and skin grafting has been attempted. Salvarsan has been given three times, since which improvement has been satisfactory. Now under medicinal treatment and electrical hyperemia locally.

CASE 9. M. L., white female, age nine years, Daytona, Florida. Admitted to St. Luke's Hospital October 26, 1913 with tuberculosis of the spine of seven years standing. Marked deformity treated by progressive plaster casts with jury mast. Developed tuberculosis of left lung in April 1914. Condition subsided and child returned home June 1914. Has since been under observation. Spinal disease apparently arrested, bone sound but with marked deformity.

CASE 10. S. F., white male, age sixteen years, Wellborn, Florida. Referred by Dr. P. T. McClellan. Admitted to St. Luke's Hospital in October 1913 with spastic paralysis and deformities entire left side. Operations were performed October 28 and November 19, 1913 on the tendons of leg and arm. Both limbs straightened. The patient having no control of left leg an operation was performed January 28, 1914. The articular surfaces of left knee-joint were removed, and the tibia, femur and patella were nailed together; the object being to provide solid bone from hip to ankle. The result was satisfactory but the boy was returned to his home June 16, 1914 because there was no indication for further operative correction and we had no equipment for physical or manual training.

CASE 11. R. C., white male, age seventeen years, Jacksonville, Florida. Tuberculosis of the spine with extreme kyphosis and discharging abscesses. Disease dated from three years of age. Upon admission to St. Luke's there was paralysis of the lower extremities and a heavy discharge of pus from one of the old sinuses. Under extension-traction there was a continued improvement in the use of the limbs. The sinus was injected with bismuth paste. Patient discharged in March 1914 with abscesses healed and with some improvement in the use of limbs.

CASE 12. P. A., white male, age sixteen years, Williston, Florida. Referred by Dr. J. M. Good. Talipes equinus of eight years' standing. Operation at St. Luke's Hospital April 1914. The tendo Achilles was lengthened two inches and the foot straightened. Patient discharged in May 1914 foot straight. Function restored.

CASE 13. R. W., white male, age eight years, St. Andrews, Florida. Admitted to St. Luke's Hospital March 5, 1914 with lateral rotary curvature of the spine; general condition poor; marked anemia due to hookworm. Treated in progressive plaster casts with decided improvement. Hookworm eradicated while undergoing treatment. General health and strength greatly improved.

CASE 14. P. G., white male, age fourteen years, Jacksonville, Florida. Referred by Dr. N. A. Upchurch. Admitted to St. Luke's Hospital August 3, 1914 with osteomyelitis of the femur. Operation August 8, 1914. Diseased bone was removed from about eight inches of the lower portion of the shaft of the femur. Secondary operation was done November 18, 1914, in which additional necrotic bone was removed. Patient is in

excellent general health with local conditions improved. Still under treatment.

CASE 15. L. W., white male, age thirteen years, Sanford, Florida. Referred by Dr. T. A. Neal. Admitted to St. Luke's Hospital October 15, 1914 with severe osteomyelitis of the shaft, neck and head of humerus. Operation November 7, 1914. Necrotic bone was cleared away. The disease involved the upper seven inches of the bone. Still under treatment. Improvement satisfactory.

CASE 16. C. J., white male, age seventeen years, Punta Gorda, Florida. Referred by Dr. D. N. McQueen. Admitted to St. Luke's Hospital September 20, 1914 with tuberculosis of the left hip joint. Treated in long plaster spica casts. Returned home November 23, 1914. Treatment to be continued by Dr. McQueen.

CASE 17. A. N., white male, age five years, Jacksonville, Florida. Referred by Dr. J. K. Simpson. Admitted to St. Luke's Hospital March 22, 1914 with tuberculosis of the spine of six months standing; mid dorsal kyphosis unable to walk without support. Treated on Bradford frame with gradually increasing extension of the spine. Still under treatment. General condition excellent; spine nearly straight; process apparently arrested.

CASE 18. R. H., white male, age fourteen years, Punta Gorda, Florida. Referred by Dr. D. N. McQueen. Admitted to St. Luke's Hospital September 20, 1914 with hare lip and cleft palate. Operation October 8, 1914. Hare lip was repaired. Result satisfactory. Returned home October 31, 1914 with instructions to have decayed teeth repaired and return for operation on palate.

CASE 19. A. C., white female, age 4, Jacksonville, Florida. Admitted to St. Luke's Hospital September 28, 1914 with abscess of the inner aspect of the right thigh. Operation by Dr. Buffalow. Abscess drained. Discharged cured October 1914.

CASE 20. E. A., white female, age twelve years, Plant City, Florida. Admitted to St. Luke's Hospital October 24, 1914 with spastic paralysis and deformity of the right arm and right leg. Operation October 31, 1914 at St. Luke's. The knee was straightened and the tendo Achilles was lengthened. The astragalus was removed and the foot placed in good position. The object of the work being to eliminate the ankle joint and thus do away with the necessity for braces to hold up the foot. The child is still under treatment but unless we have necessary equipment for training will have to be returned home with her potential improvement incomplete.

CASE 21. U. K., white male, age twelve years, Key West, Florida. Referred by Dr. W. R. Warren. Admitted to St. Luke's Hospital October 21, 1914 with right talipes equinovarus, neglected type; walking on outer aspect of foot. Operation October 24, 1914 at St. Luke's. Tenotomy of tendo Achilles; cuneiform resection of the metatarsal bones. Foot put up in plaster in the valgus position. Still under treatment. Practically cured. Foot in excellent position. Patient will be sent home shortly with position and function entirely restored.

CASE 22. L. H., colored female, age six months, Jacksonville, Florida. Admitted to Brewster Hospital October 30, 1914 with marked double club foot. Operation at Brewster December 9, 1914. Tenotomies were done on both feet; position corrected. Now under treatment in adhesive and plaster dressings.

CASE 23. D. S., white female, age fifteen years, Jacksonville, Florida. Admitted to St. Luke's Hospital December 1914 with severe osteomyelitis and periostitis of the left tibia. Operation and treatment will be given in 1915 report.

CASES 24, 25, 26—The D. R. children, aged nine, twelve and fourteen years respectfully, of Zephyrhills, Florida. Referred by Dr. W. C. Rice. These cases presented a type of amaurotic family idiocy, a high grade imbecility with muscular dystrophy, of leutic origin, coming on at about six years of age. Salvarsan was given and the children were returned home for further treatment by Dr. Rice.

Of the cases examined or admitted to hospital for observation and subsequently returned to their homes without treatment because of lack of adequate facilities, there were included cases of muscular dystrophy, congenital syphilis, lateral curvature of the spine, spinal tuberculosis, spastic paralysis in all its forms, and poliomyelitis. Of twenty-three cases of poliomyelitis, spastic paralysis and spinal curvature but two were admitted during 1914. While operative correction is often indicated in such cases to remedy actual deformity, yet unless active training treatment is instituted following operation the operative work is often useless because without proper care the patient relapses to the original deformity.



Figure 1. A. N. Tuberculosis of the spine with characteristic deformity.

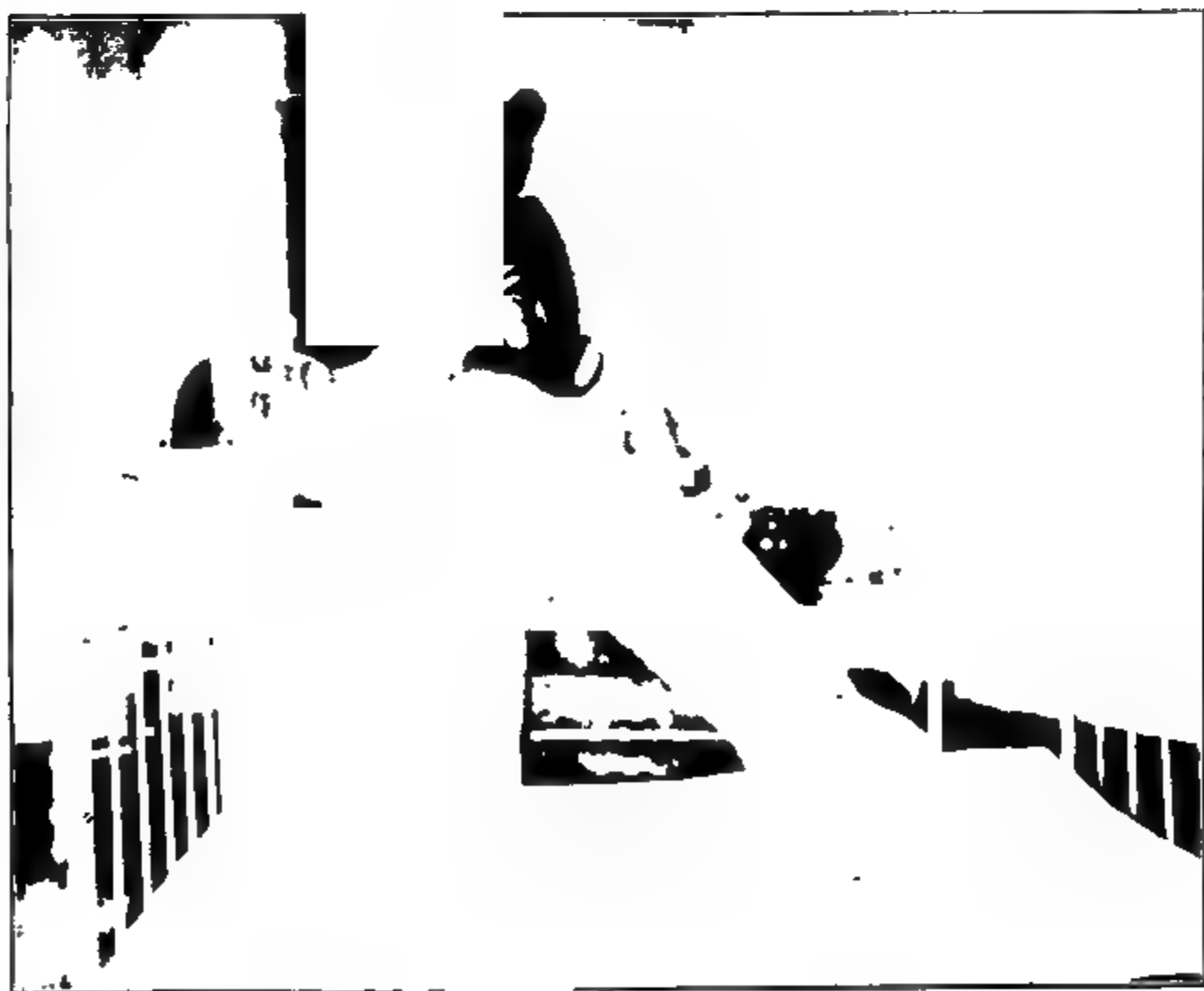


Figure 2. A. N. On Bradford frame undergoing treatment for cure of disease and correction of deformity.

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Figure 3. E. A. Talipes equinus and contracture deformity of knee Result of spastic paralysis.

Figure 4. E. A. Result after operation on tendons at knee joint and on bones and tendon of foot and leg.

Figure 5. R. W. Lateral rotary curvature of the spine.

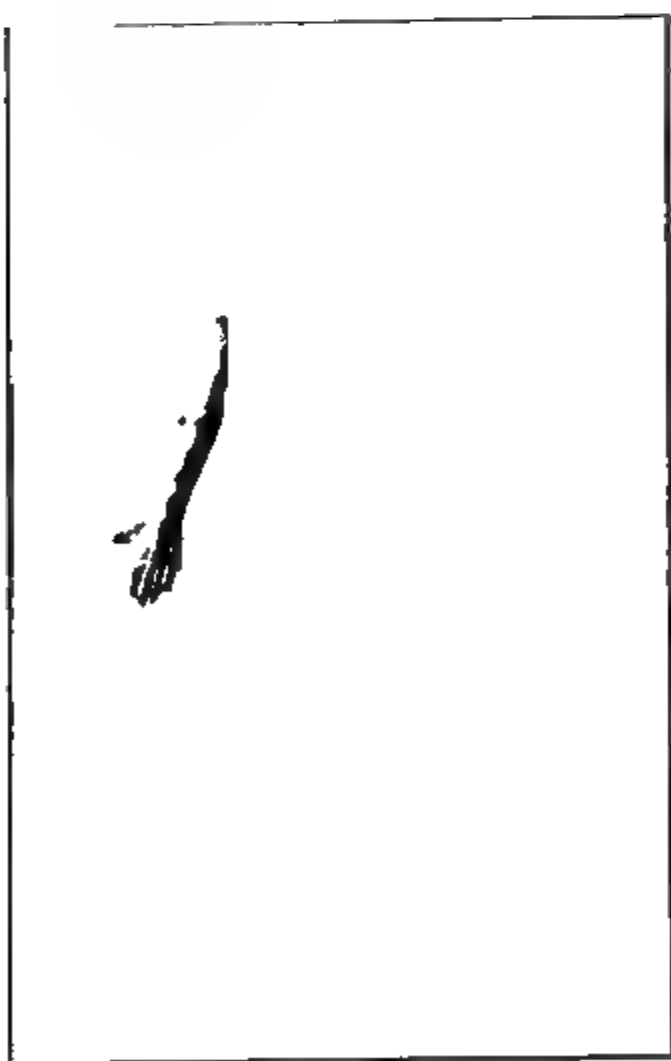


Figure 6. R. W. In corrective plaster cast showing method of forcing prominent ribs inward by pads and straps. The cast is cut out on the other side to allow for expansion of

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Figure 7. M. P. Lateral rotary curvature of the spine. Extreme neglected type.

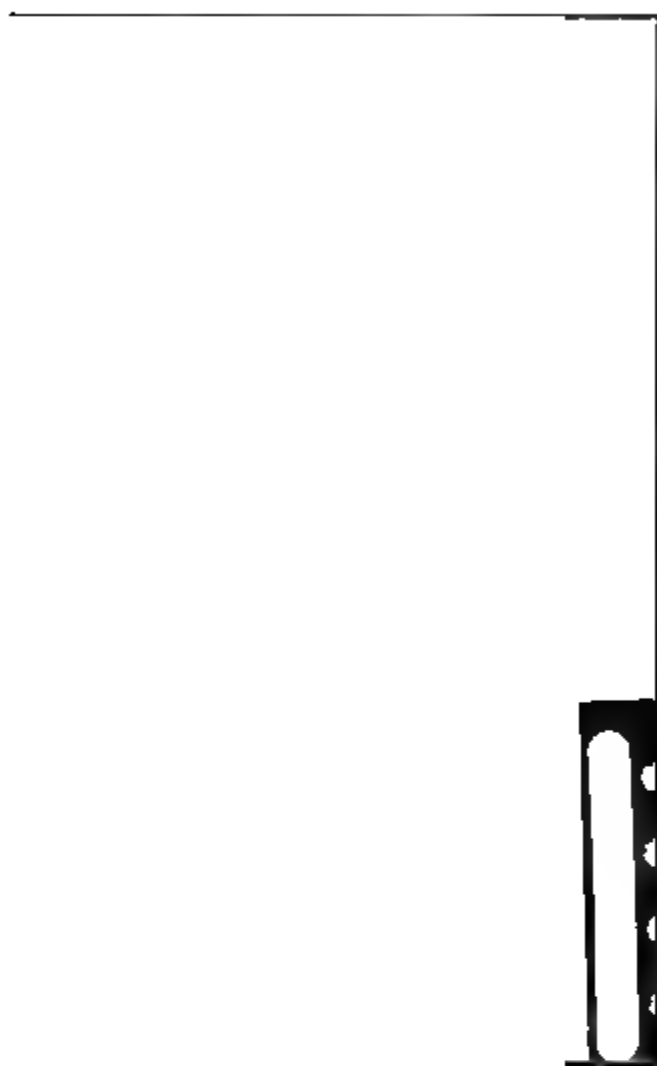
Figure 8. M. P. In first corrective plaster jacket.

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Figures 9, 10 and 11. Radiographs showing types of osteomyelitis (destruction of bone due to infection) of tibia (D. S. 9), femur (P. G. 10) and humerus (L. W. 11).

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Figure 12. S. F. Deformities of upper and lower extremities following spastic paralysis.

Figure 13. S. F. After corrective operation on tendons of extremities.

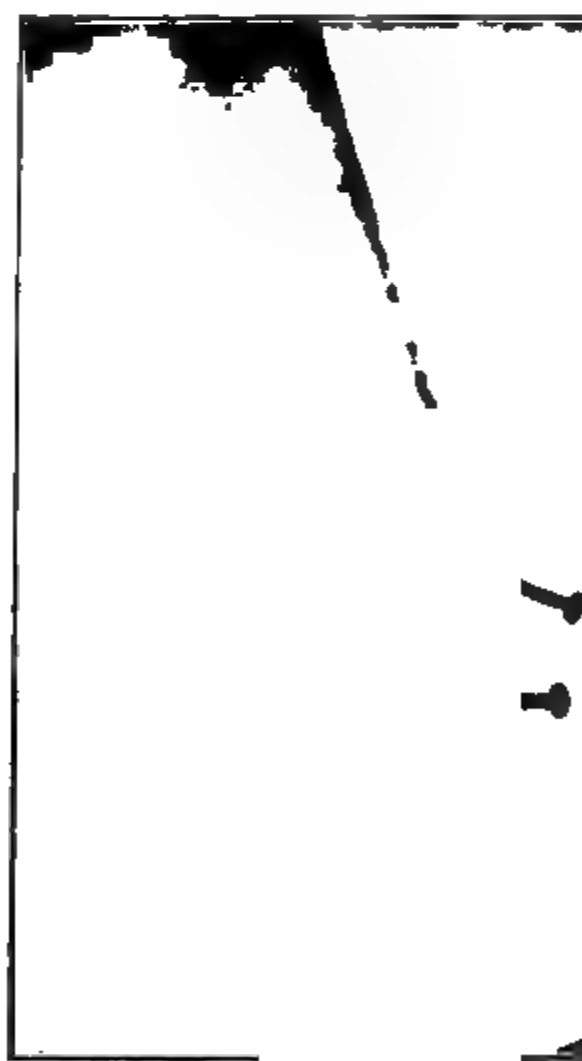


Figure 14. S. F. Muscular action being entirely lost in the left lower limb, the knee joint was removed and the femur, tibia and patella were nailed together as shown in the radiograph, thus providing a solid bone from hip to ankle joint.

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Figure 15. R. H. Unilateral hare lip.



Figure 16. R. H. Twelve days after repair.

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Figure 17. U. K. Extreme type of neglected club foot (talipes varus).

Figure 18. U. K. After corrective operation on bones and tendons.

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Figure 19. View of children's ward St. Luke's Hospital, Jacksonville, showing some of the state patients.

Figure 20. Children's ward at St. Luke's Hospital, Jacksonville. State cases.

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REPORT OF BOARD OF EMBALMERS' EXAMINERS

DR. JOSEPH Y. PORTER, *Chairman*,

DR. HENRY HANSON,

DR. C. H. DOBBS.

REPORT OF BOARD OF EMBALMERS' EXAMINERS

Jacksonville, Fla., May 18, 1914.

To the President and Members of the State Board of Health:

A report of an examination of embalmers, held at the executive offices of the Board May 15 and 16, 1914, is submitted herewith.

26 applicants were duly admitted to the examination upon having filed application for examination and found eligible.

Owing to the large number of applicants, two days were required to complete the examination, which consisted of written and oral tests.

The following questions made up the written examination:

Give brief, concise biography which will include birthplace, age, residence and school attended. State whether you have served as an apprentice and how long. Also what other experience you have had in this line of work.

1. What do you consider a positive sign of death, and what methods would you employ to determine that life is extinct?

2. What is embalming?

3. What is meant by arterial embalming?

4. What is meant by cavity embalming?

5. Which is the more important—arterial or cavity embalming?

6. In what class of cases is cavity embalming necessary?

7. Do you use the same embalming fluid for all cases?

ANATOMY.

8. Name the three cavities of the body that are important from the embalmer's point of view.

9. Name the important organs in each of the three cavities referred to in the previous question.

10. Describe an artery and tell how it differs from a vein.

11. Name the four arteries through which embalmers usually make their injections.

12. Describe the pulmonary circulation.

BACTERIOLOGY.

13. What are bacteria? In what part of the body are bacteria always present in large numbers?
14. What are the causes of putrefaction and decay?
15. What conditions are necessary for bacteria to grow and multiply?
16. What diseases can be successfully vaccinated against?
17. Under what conditions would it be safe for you to handle a body dead of smallpox?

RULES.

18. What bodies are forbidden disinterment?
19. What bodies require embalming before shipment?
20. What preparation is necessary before shipping body of person who died of diphtheria or scarlet fever?

The second day was devoted to oral questioning, in which Prof. Chas. O. Dhonau, President of the Cincinnati College of Embalming and Mr. H. S. Moulton, of Jacksonville, very kindly lent their aid.

The written examination was graded as two-thirds and the oral as one-third in arriving at the percentages given. Those having a percentage of 75 per cent or over were granted licenses.

Out of 26 taking the examination, 21 were successful and 5 failed.

Those successful, and granted licenses to practice embalming in the State, are as follows:

C. E. Henderson, Tampa, Fla.....	License No. 141
James Washington (Colored), Jacksonville, Fla..	License No. 142
Willis R. Tomlinson, Jacksonville, Fla.....	License No. 143
E. L. Morgan, Arcadia, Fla.....	License No. 144
G. B. Overton, Plant City, Fla.....	License No. 145
Leonard F. Sanchez, St. Augustine.....	License No. 146
Cary Hand, Orlando, Fla.....	License No. 147
J. L. McClelland, Punta Gorda, Fla.....	License No. 148
John R. Johnson, Jacksonville, Fla.....	License No. 149
Mrs. L. E. Bruce, St. Petersburg, Fla.....	License No. 150
Kelsey L. Pharr (Colored), Miami, Fla.....	License No. 151
Wm. S. Smith, Clearwater, Fla.....	License No. 152
S. R. Pyles, Jacksonville, Fla.....	License No. 153
D. N. Disbennett, New Smyrna, Fla.....	License No. 154
Levin King Vinson, Tarpon Springs, Fla.....	License No. 155
Andrew Froscher, Jr., Titusville, Fla.....	License No. 156
R. E. Goodman, DeLand, Fla.....	License No. 157
D. C. Thompson, St. Cloud, Fla.....	License No. 158

Wm. C. Cooper, Jr., Jacksonville, Fla.....License No. 159
Edward W. Williams, (Col.), Jacksonville, Fla...License No. 160
Lionel Brazelton, Tampa, Fla.....License No. 161

Respectfully submitted,

BOARD OF EMBALMERS' EXAMINERS,

JOSEPH Y. PORTER, *Chairman.*

BACTERIOLOGICAL LABORATORIES
REPORTS OF

DR. HENRY HANSON, (Central Laboratory)

Senior Bacteriologist.

DR. H. R. MILLS, Bacteriologist, Tampa Laboratory.

DR. F. A. BRINK, Bacteriologist, Pensacola Laboratory.

REPORT OF DR. HENRY HANSON,
SENIOR BACTERIOLOGIST

Jacksonville, Fla., Jan. 1, 1915.

DR. JOS. Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit report of laboratory operations for the year 1914, the eleventh annual report of the Central Laboratory located at Jacksonville.

At the close of 1914, the State Board of Health has six laboratories so located that all points in the State are readily accessible. The six laboratories offer all the laboratory facilities which the State needs. The experience of the last five years has shown where changes and improvements are desirable whereby the laboratories can be made to render the greatest service to the people of the State. Certain changes have already been made, others are recommended.

That the value of these laboratories to the State is appreciated is shown by the steady increase of the work. There are many however, who appear not to know that they exist, or that they offer free and accurate information on all diseases of a communicable nature. These laboratory facilities have offered information on lines which do not strictly pertain to the conservation of public health, such as unrinalysis and diagnosis of pathological tissues. Fortunately, routine unrinalysis has been ruled out.

The function of a Public Health Laboratory is to furnish prompt and accurate reports on specimens sent in. This requires competent and active laboratory management in a well equipped laboratory. However accurate a laboratory and however willing a service rendered, it still requires intelligent cooperation by the physicians who patronize the laboratories. The physicians in the State must give the closest attention to the train schedules and mail service and specimens mailed at the postoffice should carry sufficient postage and be mailed before the mail "is made up" and has gone to the station. This feature of the work has often been commented upon in Health

Notes during the year and has been frequently referred to in my monthly reports.

A difficulty which it seems that we cannot overcome, is the matter of specimens which have been sent "postage due." It is a daily occurrence at the Central Laboratory to receive several specimens which have only enough postage to get them out of the postoffice, where mailed, and these specimens when received in the postoffice at Jacksonville, have been held for additional postage before they could be delivered, which has often meant a delay of many hours.

The seriousness of this in diphtheria diagnoses is appreciated by all who stop to think about it. The laboratory has been unjustly censured many times for delay in reports in instances of this kind. Criticism and skepticism is generally misdirected and is made by individuals who are not well informed. Bacteriologists as a whole, are criticised where the blame lies as much with the critic as with the person criticised.

On account of the great demand for bacteriological investigation the country has been flooded with improperly trained laboratory workers who, like other medical quacks, have found that they can play upon the credulity of the uninformed and derive financial success from their operations. Men and women, boys and girls, who have only an incomplete High School education and a few weeks' training in some laboratory where they have gotten a smattering of laboratory knowledge are seeking positions and have been recommended for positions which require competent trained bacteriologists. It seems that it might be well to have a system of laboratory surveys or a commission for investigating the efficiency of laboratories and laboratory workers in all the States, such as has been adopted for the various medical schools of the country. This might serve to eliminate the unfit and establish the confidence which well equipped laboratories with trained laboratory workers deserve.

Health Officers generally, have shown a tendency to feel that reports from laboratories are not to be relied upon and feel hampered in the conduct of epidemiological work. This is often due to misinterpretation of results obtained in labora-

tories, a great deal of which has arisen from the controversy over "disease carriers."

It is necessary that all men who work in laboratories should not only know laboratory technic and be able to recognize the various organisms dealt with but they should also have sufficient training to enable them to properly interpret and make clear to the public the meaning of the presence of a diphtheria bacillus in the throat or a typhoid bacillus in excreta.

If such standards were adopted and men of ability were employed it would soon result in more uniform opinions among Executive Officers and the laboratory workers in regard to the management of public health work. The present standard of salaries throughout the country is such that men with the necessary education and training find it difficult to take up this line of work if they are not able to draw upon private funds. The diagnoses made in the Public Health Laboratories are such that it is almost a daily occurrence to make decisions which mean life or death to the patient for whom the examination is made.

When such is the case it seems that the public should be educated to demand efficiency and a willingness to pay a proper remuneration to those who are trusted with this work. In this State the cost of maintenance of the laboratories involves about two cents per individual per year, which covers salaries and total maintenance of all laboratories within the State of Florida. It is quite safe to assume that there is scarcely an individual in the State who does not spend one hundred times that amount for useless if not detrimental amusement each year.

Details:
Pellagra.

In the month of August, I was detailed to attend the Pellagra Conference and Meeting of Health Officers for the State of Kentucky. The discussion at this meeting was of such a nature as to suggest that Pellagra was a communicable disease, but the method of transmission was unknown. The etiology of the disease was not established. The Thompson-McFadden Commission was represented and reported many very interesting facts in regard to the importance of any single article of diet as a cause of the disease. They have quite definitely prov-

en that neither corn nor any other single article of diet is in itself a cause of Pellagra.

Laboratory investigations up to date are of purely negative value. It has been found however, that nearly all Pellagrins have hookworm infection, and that the hookworm treatment hastens recovery. Hookworm infection however, seems to be only a contributory factor.

The work of the United States Public Health Service points to a one-sided diet as the cause of the disease and takes the disease entirely out of the realm of operation of the Public Health Laboratory.

In the first week of September, I was directed to proceed to Miami to prepare specifications for fixtures and supplies for the State Board of Health Laboratory at that point. The specifications were placed in the hands of Dr. J. M. Jackson, Agent of the State Board of Health, and Dr. Edgar Peters, City Health Officer for Miami, who supervised the installation of the same.

Miami Laboratory.

From the 11th to the 21st of September, I was detailed to New Orleans to study the methods of the United States Public Health Service in plague eradication. Most of the time was spent in the laboratory for the examination of rats. In this period I saw thirty-four plague rats and the general technic used in the examination of more than ten thousand.

Plague.

It is absolutely necessary that a Bacteriologist should have opportunities of this kind before he attempts any investigation of his own. If he is attentive to the technic he will find that there are so many difficulties attending the laboratory work for identifying plague infection that it is very unwise to attempt it without the assistance of an expert in rat plague. The rat is a pathological animal with numerous lesions which the non-expert may call plague and on the other hand he may fail to recognize some of the mild atypical cases.

A detail to Bayard and Greenland, Florida, in November, to investigate alleged cases of leprosy and pellagra failed to establish either of the diseases at those points. The suspected leprosy cases proved to be benign leukoderma.

Leprosy.

Under the heading of animal parasites we show an increase of about eight hundred over the number of such examinations

Laboratory
Examinations.

for 1913. This number is smaller than it should be and it seems to me that the field men should be directed to urge this line of work for the coming year. The examinations have shown 33 per cent positive for hookworm in two thousand nine hundred and sixty-two specimens in 1914, and 49.6 per cent positive in two thousand two hundred and thirty-one examinations in 1913. Our results indicate that the laboratory is being used more for the diagnosis of mild obscure cases and that the physicians are diagnosing and treating the pronounced cases on clinical symptoms.

Diphtheria.

Fewer examinations were made for diphtheria than during 1913 which is due to the fact that the Central Laboratory has not done the work for detection of carrier cases for the Jacksonville City Board of Health in the special school investigation conducted by Dr. C. E. Terry. In this investigation cultures for release of cases quarantined were sent to the Central Laboratory.

For laboratory statistical purposes we have listed a number of examinations of stained smears from swabs from suspected new cases. In this series we have four hundred and sixty-nine examinations in which we find 15.75 per cent positive for diphtheria bacilli. No direct swab examination was made for release or carrier cases. The positive results from swab examinations were later confirmed by cultures on Loefflers blood serum media.

Of the three thousand one hundred and seventy throat cultures examined during the year, 15.39 per cent were positive, showing a close similarity to the ratio obtained on swab examinations. The percentage of positives was lower for 1914 than for any of the previous five years.

1910—	148 swabs examined with 19.92 per cent positive.
	399 cultures examined with 28.32 per cent positive.
1911—	389 swabs examined with 21.3 per cent positive.
	399 cultures examined with 28.27 per cent positive.
1912—	848 swabs examined with 19.92 per cent positive.
	900 cultures examined with 34.44 per cent positive.
1913—	967 swabs examined with 18.71 per cent positive.
	4,265 cultures examined with 16.43 per cent positive.
1914—	486 swabs examined with 15.75 per cent positive.
	3,170 cultures examined with 15.39 per cent positive.

The averages for positive swabs and cultures examined

during the last five years give 19.12 per cent positive for two thousand eight hundred and thirty-eight swab examinations and 24.57 per cent for nine thousand one hundred and twenty-three cultures.

Of the diphtheroid organisms we include the following in our positives, according to Wesbrook's classification: types a, c, d, a', c' and d'. The solid types a'', c'' and d'', are considered questionable for diagnosis. If one included such types as c'' the percentage of diphtheria carriers would become very high indeed, because there are so many organisms of this type found in the throats of healthy individuals that one would have great difficulty in distinguishing between the c'' type and other uniform staining bacilli. The same applies to type d''.

During the meeting of the American Public Health Association held in Jacksonville in December, Dr. Kinyoun presented a paper on a modification of Ponder's stain for diphtheria diagnosis. The stain is made up as follows:

Toluidin blue.....	.5 grams
Azur I.....	.05 grams
Grubler's Methylene blue.....	.05 grams
Glacial Acetic acid.....	5 cc
Alcohol 95 per cent.....	25 cc
Water up to.....	600 cc

Mix dye and alcohol, then add water and then acid and allow to stand twenty-four hours and filter.

We have used this stain on a limited number of cases, but at the close of the year have not enough data to draw any conclusions. Our limited results however, are very promising. It is hoped that this stain will help to eliminate a large number of the doubtful and nonvirulent forms.

The number of positive cultures show a decided increase each year during the first three months of the school year. Whether this increase is due to the presence of actual cases of a mild nature or to diphtheria bacilli carriers is a question which is being argued. In order to properly answer this question a careful survey should be made of a school where cases or carriers have been found and swabs taken from all throats for cultural examination. The positive cases should be taken out of school and the remaining children should be swabbed again to determine if any new cases or carriers have

developed. If the cases or carriers which appear at this time are removed and a third swabbing is made one ought to get data which is of some value showing what effect these have on the incidence of the reappearance of the disease or "carrier cases." The ideal method of pursuing this investigation further would be to return these children who had been cases or carriers to a school or room isolated from the rest of the school and then keep these under the care of a competent observer.

If an infected child is present among a group of children an opportunity for conveying infection from one child to another is very much greater than among a group of adults on account of the habit children have of sticking their pencils, etc., into their mouths and passing them on to another child who invariably does the same thing. It has also been observed that children will borrow chewing gum from one another. It is on account of such characteristics of children that one must consider the presence of a carrier of typical diphtheria bacilli (type a, c, d, or a', c', d',) a possible menace to other children.

It is a mistake to lay all the emphasis on diphtheria carriers. Those who inspect school children's throats find that a large percentage have enlarged and inflamed tonsils which when cultured show virulent streptococci. From the investigations made by Stokes, Arms, Irons and others, we know that dirty milk is often the cause of serious throat troubles, and that milk is a favorable medium for the growth of both diphtheria bacilli and streptococci. For that reason I believe that when a complaint comes from a community about the presence of diphtheria or other throat troubles the State Board of Health should have *authority* to inspect and to supervise and to correct the existing defects in dairy conditions. *In fact it would be for the interest of the public health, if all dairies operating within the State were required to have certificate from the State Board of Health or from some authority approved by the State Board of Health.*

In order to overcome the delay which has been complained of in the past in diphtheria diagnoses we have communicated with a number of City Health Officers in the larger towns

throughout the State in regard to supplying them with Loeffler's blood serum tubes which they will furnish to physicians of their city to inoculate from their suspected throat cases. During the warm weather these cultures will develop sufficiently in transit to allow diagnosis as soon as the tube is received in the laboratory. In throat cases where there is no definite clinical manifestations of diphtheria this will furnish sufficiently prompt report for the physician to be guided as to whether or not he will administer antitoxin. In the definite clinical cases of diphtheria I do not believe that it is advisable to wait for this diagnosis but antitoxin should be given at once in order to be of the greatest value. When one has access to specific methods of diagnosis and to a definite specific therapeutic agent such as antitoxin it does not seem that it is wise to give antitoxin in all cases of sore throat simply on suspicion that it might be diphtheria. Certainly there is no call for giving antitoxin to a case of Vincents angina, or to one with a syphilitic sore throat.

Lactic Acid
Bacilli and
Diphtheria
Carriers.

Last year a great deal was said about the value of lactic acid bacillus cultures as an over rider for diphtheria bacilli. The clinical results have been of doubtful value. In order to check the action of the lactic acid bacillus on the diphtheria bacillus we isolated a number of pure cultures of diphtheria bacilli and planted these in milk tubes with the lactic acid bacillus. After twenty-four and forty-eight hours incubation subcultures from these tubes were made on blood serum media and viable diphtheria bacilli were obtained which indicates that the lactic acid bacillus is valueless as a medium for destroying diphtheria bacilli in the throat.

Gonorrhœa.

During 1913 the Central Laboratory had four hundred and thirty-seven such specimens for examination with 41.8 per cent positive. In 1914 we have had six hundred and seventy-one specimens with 38. per cent positive.

Malaria.

Malaria has shown an actual decrease in the number of specimens submitted and also in the percentage of positives. Six per cent of the specimens were positive in 1914, and eleven per cent positive in 1913.

Typhoid.

Typhoid shows a rather decided increase over last year both in the number of specimens submitted and in the percentage of positives. 1914 shows 21.5 per cent positive in two thousand one hundred and ninety-nine specimens while 1913 shows only 18.19 per cent positive in sixteen hundred and fifty-five examinations. There were two hundred and seventy-two more cases diagnosed positive in the Central Laboratory in 1914 than in 1913.

Tuberculosis.

The specimens of sputum submitted is practically the same with a very slight decrease in the number of positives. The percentages are 24.58 in one thousand six hundred and seventy-two specimens for 1914 and 26.5 in one thousand six hundred and seventy-one specimens for 1913.

Rabies.

There is a very gratifying decrease in the number of dogs' heads sent in for examination for rabies and in percentage of positives. In 1913 we had one hundred and nineteen brains for examination with 58.8 percentage positive while in 1914 we had eighty-two brains with 43.9 percentage positive for hydrophobia. No human cases have been reported to the Central Laboratory.

Water.

One of the greatest improvements which has been made in the laboratory during the last year has been in connection with examinations for water. This is largely due to the fact that we have secured Mr. W. D. Hayes, formerly Assistant to Dr. Marks, Chief of Bureau Sanitary Engineering, of the State Board of Health of Kentucky, who is trained in sanitary water analysis. We are now making a complete sanitary chemical and bacteriological analysis of all samples submitted. The chemical analysis of water in the laboratory at the present time covers the following points: color, odor, turbidity, nitrogen as free ammonia, albuminoid ammonia, nitrates and nitrites, chlorine as chloride, oxygen consumed, oxygen dissolved, total solids, temporary hardness and permanent hardness.

In order to have the water collected in the proper manner a special blank has been drawn up, a copy is attached hereto. This gives detailed instructions for collecting samples and also calls for information of the nature of the water and surrounding conditions. In order to secure water according

to instructions a special container has been devised for shipping iced samples. Bottles are protected from contamination by a second container made of copper with a water tight joint which protects the sample bottle from contamination with dirty ice or ice water.

It would seem that in as much as this work is for the welfare of the State at large that the Express Company should be requested to give a flat rate of twenty-five cents for each of these shipping cases to and from any point in the State. They are so gotten up that they can be handled without difficulty and are practically unbreakable.

The number of pathological tissues has also increased during the past year. The increase is very marked in specimens showing carcinoma; sixteen for 1913, and twenty-nine for 1914. The Secretary for Control and Prevention of Cancer requests cooperation from the State Board of Health in securing data on prevalence.

Pathological
Specimens.

The animal house which has been completed and equipped during the past year has very greatly added to our laboratory facilities. Equipment of many kinds has been added during the past year which with a few additions will place us on an equality with any other public health laboratory.

Equipment.

We have made several changes in the personnel of the laboratory owing to the establishment of branch laboratories at Miami and Tallahassee. Dr. Iva C. Youmans, who for several years has been First Assistant in the Central Laboratory was placed in charge of the Branch Laboratory at Miami. Dr. W. A. Claxton, formerly Second Assistant in the Central Laboratory has been made Bacteriologist in charge of the Branch Laboratory at Tallahassee.

Personnel.

To fill these vacancies and that created in the Tampa Laboratory by the resignation of Dr. G. H. Simon, the following men have been secured: Dr. W. L. Holt, Dr. J. W. Denton and Mr. W. D. Hayes. Dr. Holt has been detailed to Tampa to assist Dr. H. R. Mills, who succeeded Dr. G. H. Simon as Bacteriologist in charge of the Tampa laboratory. Dr. Denton and Mr. Hayes have been retained in the Central Laboratory and both have rendered satisfactory service, and have shown themselves to be capable men.

Miss Pearl Griffin, the laboratory stenographer, has shown herself capable to handle the highly technical correspondence and the ever-increasing clerical details.

Mr. Truscott Copp has shown great ingenuity and has risen to the occasion at all times in the enormous amount of work which has been assigned to him as technician, chief of the laboratory shipping department and care of the refrigerator plant. His services merit an increase in salary.

Harold Benedee has also shown an ability and a willingness to work which has made it possible for us to have the necessary materials on hand to do the large amount of work shown in this report. I recommend an increase in salary for him.

In conclusion it gives me great pleasure to acknowledge the continued ready response of the State Health Officer to the many requests of the writer and for advice which has enabled him to do what is herein reported.

Very respectfully,

HENRY HANSON,
Senior Bacteriologist.

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	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Para-														
sites :														
Hookworm :														
Pos.	97	78	113	138	125	88	80	98	46	61	22	28	974	
Neg.	273	151	236	269	238	159	117	128	109	120	80	107	1,988	
Unfit		1	1					1			1		4	
Amoeba	1	2	1	2		3	1	2		1	3	1	17	
Ascaris	7	3	7	16	2	2	3		2	2		1	45	
Oxyuris					2				1			1	4	
Strongyloides				1									1	
Tapeworms .	5	3	5	5	5	3	5	4	4	4	1		44	
Trichiuris ...	9	6	16	18	4	5	2	5	1	1		1	68	3,145
Diphtheria :														
Swabs :														
Pos.	3	2	1	2	3	5	2	10	11	11	14	11	75	
Neg.	21	13	26	22	14	15	24	31	50	37	50	55	358	
Doubt	4	3	1	2	2	2	2	2	9	1	12	3	43	
Cultures :														
Pos.	36	9	14	20	18	18	35	41	84	66	89	57	487	
Neg.	205	164	156	86	38	109	181	130	176	589	536	245	2,615	
Doubt	10	2	4		2	2	7	8	5	10	17	1	68	3,646
Gonorrhoea :														
Pos.	24	20	25	21	17	17	12	20	20	28	28	25	257	
Neg.	22	26	34	33	34	29	42	41	23	25	26	26	361	
Doubt	4	4	5	6	4	11	4	9	5	1			53	671
Malaria :														
Pos.	2	12	5	16	12	21	25	15	9	6	11	6	140	
Neg.	155	121	148	181	227	264	236	252	178	164	107	118	2,151	
Doubt	1	5	1	2	1	6	2	3	5	3	4	1	34	2,325
Pathological														
Specimens :														
*Epithelioma	3	3	1		6	2	1	1	5	2	3	2	29	
Caruncle ...				1									1	
Chronic In-					2				1		2	1	6	
flammatory														
Glandular									1				1	
Hyperplasia														
Hydatidi-	1												1	
form Mole														
Hypertrophic														
Glandular														
Endometritis			1								1	1	3	
Ovarian														
Tumor				1									1	
†Sarcoma ...	1	1	1		1	1	1			1		2	9	
Syphilis	3				3	1	1						8	
Telangietatic														
Polyp		1											1	
Unclassified	7	4	5	3	5	4	5	5	5	10	2	2	57	117
Rabies :														
Dog Pos.....	5	4	4	1	3	2	4	2	5	1	1	1	33	
Dog Neg....	1			1	2	4	4	3	2	1		3	21	
Dog Doubt..		2		1	1	2	1						7	
Cat Pos....					2								2	

TWENTY-SIXTH ANNUAL REPORT
STATEMENT OF SPECIMENS EXAMINED—Continued
In the Central Laboratory, Jacksonville, Florida, 1914

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Cat Neg.....	2	2	1	.....	4	3	.....	1	.....	.....	1	1	15	
Cat Doubt....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2	
Cow Neg.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	
Rat Pos.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Tuberculosis:														
Pos.	44	45	35	36	35	39	25	27	36	35	35	19	411	
Neg.	124	131	118	119	123	107	80	64	75	100	80	86	1,207	
Unsat.	5	7	.....	3	4	6	4	9	3	6	5	2	54	1,6
Typhoid:														
Pos.	40	21	31	36	67	86	84	65	44	32	24	43	573	
Neg.	70	73	69	121	133	213	199	196	143	107	83	73	1,480	
Incomp.	12	5	5	14	23	21	19	21	10	5	4	7	146	2,1
Para-Typhoid:														
Neg. ....	.....	.....	.....	.....	1	4	1	1	2	.....	.....	4	13	
Urinalysis	15	19	17	16	17	16	10	12	11	13	13	9	168	1
Water (for Sewage Con- tamination):														
Pos.	1	2	3	2	17	7	13	9	11	9	1	10	85	
Neg.	3	11	17	12	16	25	10	15	9	12	8	13	151	
Doubt .....	.....	1	.....	4	.....	.....	1	.....	.....	.....	.....	7	13	2
‡Miscellane- ous:														
Animal In- oculation	.....	.....	1	.....	.....	4	3	.....	.....	.....	.....	6	14	
Autogenous Vaccine ...	1	3	.....	2	1	2	.....	.....	.....	.....	4	4	17	
Blood Count:														
Differential	4	1	6	5	5	7	4	6	4	1	.....	3	46	
Plain .....	.....	.....	3	4	1	.....	.....	1	.....	3	.....	1	13	
Leprosy:														
Neg.	2	.....	.....	1	.....	.....	.....	.....	2	.....	.....	.....	5	
Ophthalmia:														
Pos. ....	.....	.....	2	1	.....	.....	.....	1	.....	.....	1	.....	5	
Neg. ....	.....	.....	.....	2	2	.....	.....	2	.....	.....	.....	.....	6	
Doubt .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Spinal Fluid..	4	6	1	2	.....	.....	.....	.....	1	.....	1	2	17	
Spirochaete Pallida:														
Neg. ....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	3	6	
Vincent's Angina .....	.....	.....	.....	.....	1	.....	2	.....	3	.....	4	.....	10	
Unclassified ..	7	3	21	13	17	10	22	17	9	26	6	15	166	3
	1,234	971	1,142	1,241	1,240	1,326	1,274	1,260	1,121	1,494	1,283	1,007	14,593	14,5

*All Epitheliomas and Carcinomas are classified under the general heading Epithelioma which includes 3 Chorio-Epithelioma, 1 Rodent Ulcer, 7 Adeno-Carcinoma, and Squamous celled Carcinoma.

†Under general heading Sarcoma there are 2 Alveolar Sarcoma, 1 Round celled Sarcoma and 1 Fibro-Sarcoma.

‡Included under miscellaneous unclassified are 4 Meningitis, 2 Tetanus, 54 Milk, 55 Cultures, 2 Knee Fluid, 1 Arthritis Fluid, 2 Pleural Fluid, 3 Gastric Contents, 3 Leukemia, Vomitus, 3 Mucous Colitis, 1 Synovial Fluid, 1 Aspergillus, 1 Conjunctivitis, 9 Occult Blood, 1 Plerocercoid Debothriocephalus, 1 Hymenolepis Murina, 1 Lupus, 2 Myiasis, 1 Filaria.

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914.

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Alachua	2	1	.....	3	3	.....	1	.....	10
Alton	1	.....	.....	.....	2	.....	.....	.....	3
Altoona .....	.....	.....	.....	.....	.....	1	.....	.....	1
Anthony .....	.....	.....	.....	.....	.....	7	.....	.....	7
Apalachicola	4	.....	.....	3	2	.....	.....	.....	9
Apopka .....	.....	.....	1	1	6	1	.....	.....	9
Arcadia	1	1	2	20	2	.....	1	.....	27
Archer .....	.....	.....	.....	1	.....	7	.....	.....	8
Avon Park.....	.....	.....	.....	.....	1	1	.....	.....	2
Baldwin .....	.....	.....	.....	3	.....	.....	.....	.....	3
Bagdad .....	.....	.....	.....	2	5	.....	.....	.....	7
Bartow	2	3	2	7	11	8	.....	.....	33
Bayard .....	.....	.....	.....	.....	.....	3	.....	.....	3
Bell .....	.....	.....	.....	.....	.....	1	.....	.....	1
Bellview .....	.....	.....	.....	.....	.....	5	.....	.....	5
Blichton .....	.....	.....	.....	.....	1	.....	.....	.....	1
Bluff Springs.....	3	.....	.....	.....	.....	.....	.....	.....	1
Bonifay .....	.....	.....	.....	.....	.....	1	.....	.....	1
Bostwick .....	.....	.....	.....	.....	.....	.....	1	.....	1
Bowling Green.....	.....	.....	.....	.....	.....	7	.....	.....	7
Bradentown	2	.....	3	2	6	6	.....	.....	19
Brandon .....	.....	.....	.....	.....	1	1	.....	.....	2
Branford	1	.....	.....	.....	.....	3	.....	.....	4
Brooksville	1	1	1	3	2	3	.....	.....	11
Bronson .....	.....	.....	.....	.....	1	7	.....	.....	8
Bushnell .....	.....	.....	.....	5	.....	1	.....	.....	6
Callahan .....	.....	.....	.....	.....	1	.....	.....	.....	1
Campbellton .....	.....	.....	.....	1	.....	1	.....	.....	2
Campville	1	.....	.....	1	.....	1	.....	.....	3
Carrabelle .....	.....	.....	.....	.....	.....	1	.....	.....	1
Cedar Key.....	.....	.....	.....	.....	.....	.....	1	.....	1
Center Hill.....	.....	.....	1	.....	2	5	.....	.....	8
Centralia .....	.....	1	.....	.....	.....	.....	.....	.....	1
Century	19	.....	.....	1	.....	2	.....	.....	22
Chattahoochee	1	.....	.....	.....	1	.....	.....	.....	2
Chipley	1	.....	.....	.....	2	.....	.....	.....	3
Christina .....	.....	.....	.....	2	.....	.....	.....	.....	2
Citra .....	.....	.....	1	3	.....	17	.....	.....	21
Clearwater .....	.....	3	.....	3	1	1	.....	.....	8
Clermont .....	.....	1	.....	1	.....	.....	.....	.....	2
Cocoa .....	.....	.....	.....	3	3	7	.....	.....	13
Coleman .....	.....	.....	.....	1	.....	.....	.....	.....	1
Cottondale .....	.....	.....	.....	.....	1	.....	.....	.....	1
Crescent City.....	.....	.....	1	.....	1	10	.....	.....	12
Crestview .....	.....	.....	.....	.....	.....	6	.....	.....	6
Crystal River.....	.....	.....	.....	1	.....	.....	.....	.....	1

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Dade City.....				4					4
Daytona	20		1	29	8	3			61
DeFuniak Springs.....	28				2	11			41
DeLand			1	1	2	9			13
Delray	3	1		3	3	4			14
Dowling Park.....		2		3			1		6
Dunedin				1					1
Dunnellon			2	1		25			28
Dupont			1	1		1			3
Eau Gallie.....						1			1
Emporia					3				3
Eugene						1			1
Eustis	3								3
Fairfield						4			4
Fellsmere	2								2
Fernandina	1			3	3	1			8
Flomaton					1				1
Floral City.....						1			1
Freeport						8			8
Frost Proof.....				2					2
Fort Dade.....					1				1
Fort Green.....						1			1
Fort Meade.....		3		4		2			9
Fort Myers.....		1	1	11	5	8			26
Fort Ogden.....				3	3	8			14
Fort Pierce.....		3		3	23	10			39
Gainesville	29	12	13	18	8	4	1		85
Galliver						1			1
Garniers						10			10
Golding				1					1
Goulds						1			1
Graceville	1								1
Grandin					1	4			5
Grand Ridge.....						1			1
Green Cove Springs.....	2	5				1			8
Greensboro					2	3			5
Greenwood							1		1
Greenville				6	1	1			8
Gretna				2		7			9
Hampton						4			4
Havana							1		1
Hawthorn	3			1		1	2		7
Hernando					3	3			6
Hilliard						2			2
Holder			1			5			6
Holts				2	1				3

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Homestead	1	.....	.....	.....	.....	.....	.....	.....	1
Inglis .....	.....	.....	.....	.....	.....	4	.....	.....	4
Inverness	1	.....	1	.....	.....	2	.....	.....	4
Islamorada .....	.....	.....	.....	.....	1	.....	.....	.....	1
Jacksonville	178	161	40	180	172	407	7	.....	1,145
South Jacksonville.....	5	4	1	3	.....	2	.....	.....	15
Jasper	33	.....	6	6	2	9	.....	.....	56
Jennings .....	.....	.....	.....	.....	3	.....	.....	.....	3
Kathleen .....	.....	.....	.....	.....	.....	4	.....	.....	4
Key West.....	7	1	.....	1	5	.....	.....	.....	14
Kissimmee .....	.....	.....	.....	.....	4	9	1	.....	14
Lady Lake.....	.....	.....	.....	1	.....	.....	.....	.....	1
Lake Butler.....	.....	.....	1	6	2	12	1	.....	22
Lake City.....	.....	4	.....	4	2	2	.....	.....	12
Lakeland	12	7	2	14	14	5	.....	.....	54
Lake Worth.....	.....	.....	.....	3	.....	.....	.....	.....	3
Largo .....	.....	3	2	.....	2	9	.....	.....	16
Lawtey .....	.....	.....	.....	.....	.....	.....	1	.....	1
Lebanon .....	.....	.....	.....	.....	.....	5	.....	.....	5
Leesburg	4	.....	1	6	8	4	.....	.....	23
Lemon City.....	.....	1	.....	.....	.....	.....	.....	.....	1
Limona .....	.....	.....	.....	.....	1	.....	.....	.....	1
Lithia .....	.....	.....	.....	.....	.....	.....	1	.....	1
Live Oak.....	2	2	9	14	7	8	1	.....	43
Lulu .....	.....	.....	.....	1	.....	.....	.....	.....	1
Lutz .....	.....	.....	.....	1	.....	.....	.....	.....	1
Lynn Haven.....	.....	.....	.....	.....	.....	3	.....	.....	3
Madison	1	.....	.....	.....	.....	.....	2	.....	3
McIntosh .....	.....	.....	.....	1	.....	1	1	.....	3
Malabar .....	.....	.....	.....	.....	.....	3	.....	.....	3
Malone .....	.....	.....	.....	.....	1	2	.....	.....	3
Manatee	4	.....	1	2	1	3	.....	.....	11
Mandarin .....	.....	.....	1	1	2	39	.....	.....	43
Mango .....	.....	.....	.....	2	.....	.....	.....	.....	2
Marco .....	.....	.....	.....	.....	.....	1	.....	.....	1
Marianna	8	.....	.....	1	1	.....	1	.....	11
Mayo .....	.....	.....	.....	1	.....	13	.....	.....	14
Mayport	2	.....	1	1	.....	.....	1	.....	5
Melbourne .....	.....	.....	1	1	.....	5	.....	.....	7
Melrose .....	.....	.....	3	.....	.....	2	.....	.....	5
Miami	1	5	.....	4	10	.....	.....	.....	20
Micanopy .....	.....	.....	.....	3	1	8	.....	.....	12
Micosukee .....	.....	.....	.....	3	.....	1	.....	.....	4
Milton	3	3	1	3	5	1	.....	.....	16
Millville	2	.....	.....	.....	.....	.....	.....	.....	2
Molino	1	.....	.....	.....	1	.....	.....	.....	2

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Monticello							1		1
Morriston				2					2
Moultrie						4			4
Mount Dora.....				1	1				2
Mulberry		2	1	9	5	2			19
Munson		1							1
Murdock				5					5
Muscogee			1	3					4
Myrtle						8			8
Naranja						1			1
Newberry				4	2	3	2		11
New Smyrna.....	2	3	1	3	2	14			25
Nichols					1				1
Nocatee				6	1				7
O'Brien				2		5	1		8
Ocala	9		5	24	3	39	1		81
Okeechobee						3			3
Oklawaha				1	1		1		3
Orient				1					1
Orlando	1	19	10	37	15	34			116
Ovieda						6			6
Oxford			1			1			2
Palatka	2	2	1	6	2	2			15
Palmetto	6	1		3		1			11
Panama City.....	2		1	2	2	8			15
Pensacola	24	140	31	60	65	144			464
Perry							1		1
Pierce		1							1
Pine						3			3
Pinellas Park.....						1			1
Pine Mount.....					2	1			3
Plant City.....	21	1	16	40	8	25	1		112
Pomona						1			1
Princeton		2	1	2		10			15
Punta Gorda.....	1			5	1	1			8
Quincy	4			10		3			17
River Junction.....				1					1
Riverview						1			1
Rocks Bluff.....						1			1
St. Andrews.....			1	1	1	6			9
St. Augustine.....	8	2	2	4	3	69			88
St. Petersburg.....	2	4	1	2	10	11			30
Safety Harbor.....		1		1		1			3
San Antonio.....		1		2		9			12
Sanford	5		1	1		5			12
Sarasota	2		1	1	6	2			12

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED
BY THE LABORATORIES OF THE STATE BOARD OF HEALTH
FOR THE YEAR 1914—Continued

Towns	Diphtheria	Gonorrhoea	Malaria	Typhoid	Tuberculosis	Animal Pa'tes	Rabies	Leprosy	Total
Sebastian						17			17
Sneads			1		1	5			7
Standard						1			1
Starke		1		7	2	3	1		14
Stuart		1		1	1				3
Sumner		2		2					4
Sutherland						3			3
Tallahassee	43	2	4	27	20	13			109
Tampa	122	162	90	177	191	289	10	1	1,042
Port Tampa.....				3	1				4
West Tampa.....	6	2	1	4	5	58			76
Tarpon Springs.....				1	2				3
Thonotosassa						1			1
Titusville	5	3	1	7	3	3			22
Torrey						2			2
Trenton				2	2	1			5
Warrington		1							1
Wauchula	1			18	7	18			44
Webster	2			2		1			5
Welaka		1	1			5			7
Wellborn			1	1	2	6			10
West Palm Beach.....				5	3	5			13
Wewahitchka						2			2
White Springs.....						2			2
Wildwood				2		17			19
Williston	1	4		6	2	36			49
Winter Garden.....					2	1			3
Winter Haven.....				4	1	5			10
Zephyrhills.....						4			4
	665	588	277	937	746	1,747	46	1	5,007

REPORT OF DR. H. R. MILLS,
BACTERIOLOGIST, TAMPA LABORATORY.

Tampa, Fla., Jan. 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Enclosed please find tabulated record of the work done in the Tampa laboratory during the year 1914, together with a list of the towns in the Southwest district of the State receiving positive diagnoses from the laboratory during the past year. It will be noted that there is an increase of two thousand seven hundred and five specimens examined over the total of 1913. Subtracting from this increase two thousand one hundred and thirty-eight, the number of rats examined in 1914, there is left five hundred and sixty-seven, which is the actual increase of regular specimens as compared with the year before. One striking feature of the accompanying record is the decrease in the percentage of the positive results obtained in 1914 as compared with 1913. This difference is noted particularly in the animal parasites work (with the exception of amoeba) and in malaria.

The laboratory is used principally by the physicians in rejecting or confirming diagnoses made from clinical symptoms. For example, a Doctor submits a sample of blood from a patient whom he suspects is suffering from typhoid fever, and then depends upon the laboratory to tell him whether he is right or wrong, but in many cases the laboratory is able to detect positively the evidence of the disease which was not suspected by the physician in charge of the case, and it is in these cases that the laboratory has been the means of rendering indispensable service to the diagnostician. It may be interesting to cite a few instances of this matter which occurred during 1914. Quite recently a cervical swab was sent in from the physician in one of the neighboring towns with the request that it be examined for streptococcus and staphylococcus, as the patient was apparently suffering from puerperal sepsis, and that an autogenous vaccine be made therefrom. A direct

examination of the swab showed the presence of no other organisms than gonococci, and the idea of the autogenous vaccine was abandoned and other treatment instituted. On another occasion a section of liver tissue was received and an examination for malignancy requested. No evidence of carcinoma or sarcoma was found, but on the other hand the evidence of syphilis was so marked that it was reported as probably such. A Wasserman test subsequently made resulted in a positive reaction. In the pathological work particularly, we are often able to render diagnoses which are unsuspected, as the majority of specimens of this nature are sent in to be examined for malignancy. Instead of malignancy, however, we often find unsuspected tuberculosis, syphilis, or other chronic or subacute inflammation. On two different occasions requests were made for a white blood count and a differential count on patients supposed to be suffering from appendicitis or other acute inflammatory process. Both times a leucopenia was determined by the white cell count and, in making a differential examination, typical malaria parasites were found. The cases are too numerous to mention in which we find tape worm or round worm eggs, etc., in specimens to be examined for hook worm; and the eggs of hookworm or other parasites in the amoeba specimens. Among these cases of unsuspected diagnoses the greatest surprise to the physician in charge and to the patient was a case from a neighboring town in which we made a diagnosis of myiasis in a specimen of feces which had been sent in repeatedly for hookworm examination. For nearly a year the patient in question had on various occasions noticed "worms" in the stools. The physician in charge diagnosed the case hookworm disease and sent a sample of the stool to the laboratory for examination. The worms were not included in the sample however, as it is generally understood that in examining for animal parasites we usually search for the eggs instead of the adult worms or embryos. The result of this examination was negative, not only for hookworm but for all other animal parasites. Other specimens were sent in at short intervals and were repeatedly negative, the patient in the meantime taking, at the direction of her physician, thymol and other anthelmintic with no result. We then received a letter from

the physician explaining the case in detail whereupon we requested that some of the worms be placed in salt solution as soon as passed and brought to the laboratory alive. This was done. The specimens appeared upon gross examination to be the larvæ of some insect, and, to verify this, they were placed in a bottle containing fresh human feces, the bottle closed with a piece of gauze, and then placed in the incubator. At the end of seven days flies of the species *Musca vomitoria* were found in the bottle. The physician received the report and, under appropriate management, the patient's symptoms subsided with the disappearance of the larvæ.

During the year the working force of the laboratory suffered a severe blow by the resignation of Dr. Geo. H. Simon, Director of the Laboratory. The undersigned former Assistant Bacteriologist was appointed to fill the vacancy caused by Dr. Simon's resignation and Dr. Wm. L. Holt was appointed Assistant Bacteriologist.

Yours respectfully,

HERBERT R. MILLS,
Bacteriologist.

STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA LABORATORY
DURING 1914

Mat. Ex.	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal														
Parasites:														
Hookworms														
Pos.	15	11	14	13	9	20	21	19	14	14	14	13	177	
Neg.	84	73	48	75	96	79	69	56	66	51	54	72	823	
Unfit							1						1	
Amoeba														
Pos.		3	4	1	7	4	1	1	7	1	4		33	
Neg.	20	10	5	11	25	23	12	11	21	25	23	15	201	
Unfit				1								1	2	
Ascaris														
Pos.	5	6	2	7	16	11	2	4	2	9	10	12	86	
Neg.										4			4	
Lambliia	3	1	1	1	8	6	1				1		22	
Oxyuris			2			1	1						4	
Tapeworm	3	1			2	1	1	1			2	2	13	
Trichiuris	11	9	5	5	13	14	8	8	6	16	9	11	115	1,481
Diphtheria:														
Swabs														
Neg.												3	3	
Cultures														
Pos.	34	35	38	9	7	4	6	14	24	59	63	38	331	
Neg.	68	73	193	89	42	28	37	34	41	129	106	170	1,010	
Doubtful	5	3	5		3	2		2		7	12	1	40	1,384
Gonorrhea:														
Pos.	15	12	12	14	14	12	16	17	22	18	13	14	179	
Neg.	24	18	24	23	21	20	21	27	16	28	28	29	279	
Unfit	1	3	2	3	3	1	4	2	3	1	3	1	27	485
Malaria:														
Pos.	5	6	4	13	13	11	13	3	14	6	8	7	103	
Neg.	247	199	239	269	269	245	217	187	166	182	144	127	2,491	
Unfit	6	5		1		5	1	1	1			2	22	2,616
Pathological:														
Malignant	2	3	1	2	4	3	2		1	1		5	24	
Non-Malig.	7	9	2	9	7	6	4	3	3	4	5	3	62	
Unfit	1				1	1							3	89
Babies:														
Dogs														
Pos.		2	2	2	1		1	1	1	1	1		12	
Neg.	1			2	2	1			2				8	
Unfit						1							1	
Cats														
Pos.					1								1	
Neg.			1										1	
Cows														
Pos.				1		1							2	
Neg.				1									1	
Hogs														
Neg.					1								1	27
Tuberculosis:														
Pos.	24	14	28	28	20	22	17	20	22	18	22	11	246	
Neg.	60	59	77	98	66	70	74	54	59	65	42	52	776	1,022

STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA LABORATORY
DURING 1914—Continued

Mat. Ex.	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Typhoid:														
Pos. Widal...	53	39	44	31	35	14	22	12	9	16	15	23	313	
Neg. Widal..	122	102	128	184	139	162	140	107	93	110	88	82	1,457	
Incomplete ..	23	15	16	12	20	15	12	22	12	10	7	5	169	1,931
Water:														
Pos.			1			1		1		2			5	
Neg.	2	3	10	5	3	4	2	5		5		4	43	
Miscellaneous:														
Animal Inocu-														
lations:														
Tuberculosis:														
Neg.			1				2					1	4	
Rabies														
Pos.			1										1	
Neg.				2									2	
Blood Counts:														
White	7		1	3					1	1	3	2	18	
Red											2	1	3	
Diff.	3			1			3	1	3	2	3	8	24	
Hb.												1	1	
Leprosy:														
Pos.				1									1	
Neg.		1											1	
Myiosis						1							1	
Ophthalmia														
Pos.								1				2	3	
Neg.	1	1		1	2	2	3	1	1	1	1		14	
Rat Plague:														
Neg.							88	84	609	666	516	168	2,131	2,131
Rat Leprosy:														
Pos.										4	3		7	
Glanders:														
Pos.		1											1	
Neg.		1											1	
Meningo-														
coccus:														
Neg.								1					1	
Filaria:														
Neg.	1				1	1	1	1					5	
Pus Speci-														
mens	1			4	3	2	2		2	1	1	1	17	
Cultures for														
Pus Speci-														
mens			2	1			1			1			5	
Urine	2		2	2	1			2					9	
Diazo:														
Pos.		3	2	7	7	11	6	3	3	1	1	3	47	
Neg.	3	2	3	4	2	14	5	6	2	3		6	50	
Ocult Blood:														
Pos.										2			2	
	859	723	920	936	864	819	817	712	1,226	1,464	1,204	896		11,400

TABLE OF POSITIVE SPECIMENS EXAMINED SHOWING NUMBER RECEIVED FROM VARIOUS TOWNS OF THE STATE, DURING 1914.

LABORATORY, STATE BOARD OF HEALTH, TAMPA, FLORIDA.

Tampa	1,046
West Tampa.....	76
Plant City.....	49
Lakeland	44
Wauchula	28
Fort Myers.....	24
St. Petersburg.....	23
Largo	11
Manatee	11
Palmetto	10
Arcadia	10
Bartow	9
Brooksville	7
Nocatee	7
Mulberry	6
Clearwater	5
Punta Gorda	5
Fort Ogden	5
Sarasota	4
Zephyrhills	4
Webster	4
Port Tampa	4
Fort Meade	3
Safety Harbor	3
Dade City	2
Kathleen	2
Bowling Green	2
Tarpon Springs	2
Avon Park	2
Brandon	2
Frost Proof	2
Mango	2
Bradentown	1
Fort Dade	1
Bushnell	1
Lutz	1
Daytona	1
Key West	1
Thonotosassa	1
River View	1
Limona	1
Blitchton	1
Inverness	1
Marco	1
Orient	1
Total.....	1,426

REPORT OF DR. F. A. BRINK

BACTERIOLOGIST PENSACOLA LABORATORY.

Pensacola Fla., Jan. 1, 1915.

DR. JOS. Y. PORTER,

*State Health Officer, Through Dr. Henry Han-
son, Senior Bacteriologist.*

DEAR DOCTOR:—I hand you herewith the report of specimens examined in the Pensacola laboratory during the year 1914. This shows a total of 8,585 specimens examined, which is a large number of specimens for a one-man laboratory, and yet the work has not been intolerably arduous, since a large number of these specimens consisted of rats for plague and most of these were passed upon inspection. However, during the latter part of the year, this laboratory has been a *very* busy place.

Aside from the large number of rats examined, there has been no very great change in the number of specimens examined. There was a decrease in the number of specimens for diphtheria, though the decrease is more apparent than real on account of not entering the smears from swabs as separate specimens during the entire year. The great number of diphtheria specimens last year came from DeFuniak during their large epidemic. No such epidemic has occurred in this end of the State during the past year, but with that exception, the specimens have been more numerous, that is, diphtheria seems to have been more generally prevalent, without the occurrence of an epidemic.

Typhoid examinations, both positive and negative, were approximately twice as numerous last year as they were in 1913, indicating a greater prevalence of that disease.

Comparatively few milk examinations were made in the laboratory last year, and such specimens do not belong in a laboratory of this sort, of course.

Taken altogether, the work of the year seems to the writer to have been quite satisfactory.

Respectfully yours,

F. A. BRINK,
Bacteriologist.

PENSACOLA LABORATORY, 1914 REPORT OF SPECIMENS

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Para- sites:														
Hookworm:														
Pos.	8	5	11	17	21	26	5	18	20	12	13	22	178	
Neg.	18	15	13	20	24	26	16	16	21	21	21	20	231	
Amœba coli:														
Pos.		1	1	1								1	4	
Neg.		1			2	1	1	1		1		2	9	
Doubtful					1								1	
Ascaris Lumb.		1	1			2	1					1	6	
Oxyuris Vermis.		1	1			2	1					1	6	
Strongyloides Int.					1								1	
Tapeworms	2			1	1	1						1	6	
Lungworm, pig.			1										1	
Trichoceph. Disp.	1					6					1	1	9	453
Diphtheria:														
Swabs:														
Pos.									1	1	4	7	13	
Neg.							6	2		13	31	31	83	
Doubtful									1				1	
Cultures:														
Pos.	9	1		2		4	6		12	18	16	27	95	
Neg.	44	11	19	12	1	20	29	12	36	60	65	117	426	
Doubtful						1			1	3			5	623
Gonorrhea														
Pos.	8	12	8	15	14	10	9	3	10	9	13	21	132	
Neg.	22	19	39	21	13	33	12	19	26	20	19	43	286	
Unsatisfactory			1							1			2	421
Malaria:														
Pos.	1	1	2	2	1	10	6	1	2	4	1	4	35	
Neg.	18	14	34	25	45	68	51	33	34	40	39	30	431	
Unsatisfactory			1							1			2	468
Pathological:														
Malignant	1		1		1					1		1	5	
Nonmalignant			1	2			1	4		1	1	1	11	
Unsatisfactory		1											1	17
Rabies, Dog:														
Negative				1									1	1
Tuberculosis:														
Positive	7	2	12	9	5	7	11	7	4	7	7	9	87	
Negative	18	26	36	21	33	25	22	30	21	14	25	14	285	372
Typhoid:														
Positive	3	2	3	2	2	26	13	4	8	4	5	7	79	
Negative	9	7	27	15	37	55	47	38	41	28	19	25	348	
Incomplete		2			1		5			1	3	3	15	442

PENSACOLA LABORATORY, 1914 REPORT OF SPECIMENS—Continued

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water for sewage:														
Positive			3				6						9	
Negative			4	5	2	1		2			2	4	20	29
Blood Counts:														
Plain	1	4	3	7	7	1	4	3	5	4	5	6	50	
Diff.	4	3	3	9	3	4		2		2	3	4	37	87
Ophthalmia:														
Positive							1						1	1
Urinary analyses	11	5	2	5	7	1	14	3	3	21	12	22	106	106
Milk examinations	6		3	3	4	1	26	3	3	8		20	77	77
Rats for plague:														
Negative							1,375	2,273	1,323	481			5,452	5,452
Miscellaneous ...	3	7	2	7	2		2	1	1	5	4	2	36	36
Total.....	196	140	230	206	230	330	1,667	2,476	1,573	780	310	447	8,585	8,585

VETERINARY DEPARTMENT

REPORTS OF

DR. CHARLES F. DAWSON, Veterinarian.

DR. W. A. MUNSELL, Assistant Veterinarian.

DR. J. W. DEMILLY, Assistant Veterinarian.

REPORT OF VETERINARY DEPARTMENT

Jacksonville, Fla., December 31, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I have the honor to present the annual report of the Veterinary Division for 1914, which includes also the reports of Assistant Veterinarians Munsell and DeMilly.

They are respectfully presented for publication as a part of the Annual Report of the State Health Officer, for 1914.

The activities of the veterinary division have been increased along all lines heretofore mentioned, and much new work has been undertaken and carried out, as described in the following pages.

There is an ever-increasing amount of correspondence, which shows the veterinarian's office is becoming better known and more valuable to the general public. From a mere position where the veterinarian was called to your office occasionally, and where the incumbent gave a large portion of his time to private practice, the position now demands all his time, even though he has twelve assistants located in different parts of the State, whose work greatly relieves the pressure on your office. The services of these men, as well as the thirty-two Farm Demonstration Agents, are described in this report under proper heading. There is also given a list of unofficial agents who charge a small fee for the administration of the hog cholera serum furnished by the Board. Altogether, there are one hundred and thirty-eight persons who are directly connected with the work of the veterinary division.

As in past years, I take great pleasure in embracing this opportunity to thank you for the kind and courteous treatment accorded the personnel of the veterinary division.

Yours very respectfully,

CHAS. F. DAWSON, M.D., D.V.S.,

Veterinarian.

Charles F. Dawson, Veterinarian, Jacksonville
 W. A. Munsell, 1st Assistant Veterinarian, Green Cove Springs
 J. W. DeMilly, 2nd Assistant Veterinarian, Tallahassee

Organization of
the Veterinary
Division.

F. H. Armstrong, Pensacola
 W. E. Grace, Jacksonville
 J. K. Jones, Gainesville
 W. P. Link, Tampa
 T. J. Mahaffy, Jacksonville
 F. W. Porter, Tampa
 Major Schofield, Miami
 H. A. Smith, Woodrow,
 H. H. Spencer, Jacksonville
 W. J. Tanner, St. Petersburg

Veterinary
Inspectors.

S. W. Hiatt, Gonzalez, Escambia County Live Stock Agents.

COUNTY	AGENT	ADDRESS
Alachua	Stafford Burgis	Gainesville
Baker	E. W. Turner	Macclenny
Bay	B. V. Mathis	Panama City
Bradford	O. L. Mizell	Dukes
Calhoun	J. E. Yon	Blountstown
Citrus		
Clay	W. E. Brown	Green Cove Springs
Columbia	J. D. Brown	Lake City
DeSoto	Jos. Crews	Wauchula
Duval	W. L. Watson	Jacksonville
Escambia	S. W. Hiatt	Gonzalez
Gadsden	M. C. Gardner	Greensboro
Hamilton	S. S. Smith	Jennings
Hernando	J. T. Daniel	Brooksville
Hillsborough	R. T. Kelley	Plant City
Holmes	C. A. Fulford	Bonifay
Jackson	C. W. Belser	Marianna
Jefferson	E. W. Lumpkin	Monticello
LaFayette	D. C. Geiger	Mayo
Lake	Wm. Gomme	Tavares
Leon	Frank Robinson (col.)	Tallahassee
Levy		
Liberty	A. W. Turner	Bristol
Madison	D. R. McQuarrie	Madison
Marion	S. J. McCully	Berlin
Orange	C. H. Baker	Orlando
Osceola	B. E. Evans	Kissimmee
Pasco	I. E. Soar	Dade City
Polk	A. A. Lewis	Kathleen
Santa Rosa	O. O. Simmons	Botts
St. Johns		
Sumter	G. L. Harrington	Bushnell
Suwannee	T. Z. Atkeson	Live Oak
Taylor	T. H. Stripling	Perry
Walton	J. C. Smith	DeFuniak Springs
Washington	D. G. McQuagge	Chipley

County Farm
Demonstration
Agents. Also Hog
Cholera Agents,
giving free service.

List of unofficial
hog cholera agents
whose services
may be engaged
to treat hogs for
cholera, for a fee.

ALACHUA COUNTY

Alachua
J. E. Haynesworth
M. F. Studstill
Campville
Dr. G. W. Sherhouse
Micanopy
E. D. Matthews
Newberry
J. B. Smith
Rochelle
Dr. Geo. M. Floyd
Trenton
H. W. Arrington
Geo. Asbell
J. B. Smith

BAKER COUNTY

Macclenny
R. C. Crews

BRADFORD COUNTY

Lawtey
Dr. G. W. Brown

CALHOUN COUNTY

Altha
C. A. Langford
Blountstown
J. L. Griffin
Henderson
T. Fields

CITRUS COUNTY

Citronelle
W. F. Sutton
W. F. Vause
Crystal River
J. T. Rawls
Floral City
Walter J. Young
Hernando
Dr. A. D. Puterbaugh
Homosassa
Mr. Croft

CLAY COUNTY

Belmore
E. E. Geiger
Green Cove Springs
J. L. Batten
Middleburg
M. M. West

COLUMBIA COUNTY

Benton
C. W. Cone
Lake City
J. B. Brown
P. G. Brown

DeSOTO COUNTY

Bowling Green
L. R. Sealey

Brownville
V. H. Freeman
J. F. Saxon
Fort Green
Dr. C. A. Gavin
Gardner
F. O. Baldwin
Limestone
A. Albritton
Murdock
W. J. Quick
Wauchula
Ira C. Williams

DUVAL COUNTY

Baldwin
J. H. Campbell
Broward
J. S. Higginbotham
Jacksonville
L. W. Dingman, R. F. D. 1
Grand Crossing
Mandarin
Dr. Geo. D. Kennedy

ESCAMBIA COUNTY

Atmore, Ala. (R. F. D.)
J. L. Godwin

GADSDEN COUNTY

Chattahoochee
J. L. Sunday, Jr.
Havana
M. E. McCorquadale
River Junction
J. H. McDonald

HAMILTON COUNTY

Jasper
Dr. J. H. Corbett
White Springs
H. R. Goodbred

HERNANDO COUNTY

Brooksville
W. G. Hope
A. P. McKeown
Istachatta
Dr. McKnight

HILLSBORO COUNTY

Durant
J. B. Hundley
Plant City
W. L. Holliday
Tampa
Dr. F. W. Porter
R. W. Weatherington,
1707 16th St.
Thonotosassa
R. W. Weatherington
Youmans
O. B. Wiggins

HOLMES COUNTY

Noma

Dr. R. B. Warren

Westville

Dr. D. G. Milton

JACKSON COUNTY

Campbellton

Dr. W. A. Parrish

Grand Ridge

W. J. Bradley

A. M. Singletary

Jacob

Dr. M. W. Eldridge

Sneads

A. J. Brunson

JEFFERSON COUNTY

Aucilla

Dr. W. N. McLeod

Lamont

Dr. W. H. Walker

LAFAYETTE COUNTY

Day

A. J. Fowler

Mallory

T. A. Fletcher

LEON COUNTY

Tallahassee

Centerville

Bradfordville

Miccosukee

Woodville

Chaires

G. H. Wilson

Tallahassee

SANTA ROSA COUNTY

Berrydale

J. M. Nobles

Jay

C. V. Mixon

Milton

D. W. T. Edger

ST. JOHNS COUNTY

Dewey

H. L. Manners, Bayard

Dupont

Dr. D. B. Brown

Durbin

H. L. Manners, Bayard

Elkton

Dr. F. S. Whitney

Hastings

Dr. A. Dolan

St. Augustine

Dr. B. A. Leak

Switzerland

H. L. Manners, Bayard

SUMTER COUNTY

Coleman

B. C. Bridges

Oxford

T. E. O'Dell

Webster

Dr. S. C. Wood

SUWANEE COUNTY

Dowling Park

Jno. P. Howland, Jr.

Live Oak

A. C. Johnson

Newburn

Jno. P. Howland, Jr.

O'Brien

Dr. J. H. Reynolds

T. C. Williams

Wellborn

A. S. Hogans

Dr. McClellan

Wilmarth

C. W. Cheshire

TAYLOR COUNTY

Perry

W. H. O. Johnson

VOLUSIA COUNTY

Bunnell

Favorita

Harwood

Hammond

Ormond

Seville

Volusia

Dr. D. B. Brown, Dupont

WAKULLA COUNTY

Sopchoppy

Chas. K. Allen

Wakulla

G. S. Neesmith

WALTON COUNTY

Floral, Ala. (R. F. D.)

P. S. McClung

Laurel Hill

J. B. Steel

WASHINGTON COUNTY

Chipley

Dr. J. G. Phillips

Hog Cholera.

In compliance with Chapter 6167, Laws of Florida, 1911, the State Board of Health began, in August of that year, the distribution free to all farmer-applicants, of serum to any amount asked for. By the end of the year, comprising a period of five months, the serum distributed cost the State \$2,580.00. For the year 1912, the serum cost \$12,253.00. For the year 1913, the serum cost \$8,120.00. For the present year, serum has cost over \$21,000.00.

During the latter part of the year, the demand increased so rapidly that the Board deemed it necessary to limit the amount of serum an applicant may receive, in any twelve months to 1000 c.c. or about a quart, offering, at the same time, to sell those who might require more than the allowance, the serum at cost price, in any amount. Arrangements have also been made to furnish syringes, thermometer and disinfectant used in the work of applying the "serum-simultaneous method" at cost prices, also.

The Veterinarians of the Board have made frequent demonstrations of the method employed in administering serum and virus, in various localities, but for obvious reasons could not undertake to treat hogs, all over the state. Whenever a veterinarian of the Board has visited a locality and demonstrated the methods, someone has been appointed an agent for that locality, so that farmers can secure his services for a small fee. Much of the work has been done by the County Farm Demonstration Agents, who are paid for their services in demonstrating the various improved methods of agricultural operations by the Federal, State and County governments. A class composed of these agents was instructed in the "serum-simultaneous method" by the writer at a meeting held at the University of Florida. The Federal Government has had a special agent in the field during the year, giving demonstrations and lectures upon the subject at Farmers' Institutes, under the auspices of the University of Florida. It is thus seen the subject of Hog Cholera has not been allowed to suffer from want of advertisement. What is wanted now, is more men in the field to teach and do the actual work of inoculating the hogs. It is all very well to tell a farmer how something ought to be done. Some of them will need only this word-of-mouth

More trained men
needed to do hog
cholera serum
work.

instruction, but the vast majority are at sea with a hypodermatic syringe in hand. He is awkward in using it, may break the needles, make the injection badly, and is almost sure to break the syringe in the end. He then requires a week or a month before he can get to work again, and then it is often too late to save his hogs.

The work can only be properly done by men who have become expert, as in other lines, and for this much more practical instruction is needed. The writer believes there should be a man in every precinct, the smallest political division of the State, thoroughly competent from much instruction and practical experience, to actually do this work, not for the large owner only, but for everybody who will have it done. It appears that we are merely scratching over the surface at present. It is a gigantic work, on which the hog industry largely depends. The State cannot afford to cover the ground. It must be done by the people themselves; but the State can give the instruction, and so help the farmer to help himself. In every locality there are men who do the castrations for the neighborhood, and there ought to be men in every locality to vaccinate hogs. The Board has done much toward this end, but much more needs being done. More system is needed. A visit to a man's place to vaccinate his hogs amounts to nothing of permanent value to that man, but the saving of all or a few of his hogs, for the time being. Unless we have taught him how to do this work in the future, it is travel expenses and serum largely wasted, for the State. The job is a perpetual one. The results can be measured in dollars and cents. Hence more is the reason for his doing his own work, and the State has done him a good turn when it has instructed him in the method, and demonstrated to him the value of the method. It is cheap hog insurance which he can afford to go to some expense for. Of considerable importance, also, is the fact that the owner can, under these conditions, have his hogs vaccinated at opportune times. He does not have to await the arrival of an agent from a distance, or take his chance of getting his hogs vaccinated when it is his turn, as is now the case.

With the organization now in the field working systematically, instead of at random, the whole State could be

covered in a year, possibly. A thousand men, one in each precinct, thoroughly coached in the "serum-simultaneous method" by our veterinarians and the Farm Demonstration Agents would be able to make a tremendous showing for the hog industry of Florida.

Anything short of this thoroughness, outlined, means no general progress and only success here and there. Farmers could get together in every precinct, form hog clubs, and vaccinate all the hogs in their respective communities, co-operating as they sometimes do in other lines. In this way they become independent, both of man and of the disease, as hogs properly vaccinated do not die from hog cholera. By demonstrating the protective qualities of the treatment, the farmer soon sees a good reason to improve the breed and to raise more hogs, and something to feed them on, and general agriculture is correspondingly benefited.

Methods of
employing the
serum.

There are three methods of treating hogs for cholera. They are: The first, the "Single Serum Method," which consists of a single injection of serum. This method is to be used in cases where the disease is already existing, and where the hogs, therefore, are already infected, or where they are daily in contact with infected hogs, or are on infected premises, and is the method most in vogue, at present.

The second or "Serum-Simultaneous Method" is employed to best advantage where the owner wishes to prevent a natural outbreak of the disease in well hogs. The method is attended with some little danger of causing the disease in a fatal form, because it consists in the simultaneous injections of serum and hog cholera virus. This method should be employed only where the hogs are valuable, or where the owner will go to a little trouble in management a few days before and after treatment. It should be realized by the owner that in using any method in which virus is employed, he is infecting his premises with the germ of hog cholera, and that succeeding generations of hogs may catch the disease in this way, unless they, too, are likewise treated.

The third or "Double Method" consists of a preliminary injection of serum, as in the Single Method. Ten days later a larger dose of serum and virus are injected as in the Serum-

Simultaneous Method. We thus see that the "Double Method" is a combination of the two foregoing methods. It is the safest method, as the preliminary dose of serum protects the hog from a possible sickness from the injection of the virus, later.

The following resolutions adopted at a meeting of State and Federal Veterinarians held in Chicago on the 3rd of March 1914, at which meeting the writer was present, represent the attitude of the veterinary profession upon the subject of hog-cholera control by the use of the serum.

Resolutions of
Federal and State
Veterinarians.

"We regard hog cholera as one of the greatest questions before the public at this time. The disease has been prevalent many years, with losses fluctuating between wide limits. The heaviest losses, as shown by the best available data, were 120 and 130 hogs per thousand in 1887 and 1897, respectively. The estimates for 1913 are 100 loss per thousand, and the indications are that the disease is passing through another period of rapid increase. In view of the high cost of living, such enormous losses of a valued food product must be regarded as a calamity.

"The main problem at this time is to control the disease. With progress now being made, both in science and practice, it may be expected that the question of eradication will come up later; but, unquestionably, the matter of control will be uppermost for years to come.

"For success, the first requirement is an honest and earnest purpose to co-operate as between all the interests involved, especially the scientists, the veterinary profession, farmers, common carriers, and packing interests.

"The control and final eradication of hog cholera will depend largely upon the education of farmers to the importance of observing sanitary principles.

"The serum alone treatment may be given by anyone without danger of causing hog Cholera. Such harm as follows this treatment is due mostly to ignorance in the use of serum or of sanitation. While it is preferable to have serum used only by competent veterinarians, it is not deemed advisable to require that laymen may not use serum alone.

"The closest possible supervision of the manufacture and distribution of serum should be provided, to assure its purity and potency. It is believed that this should be in charge of federal authorities in such plants as may properly come under their supervision, and provision should be made in the different states to duplicate and supplement the federal efforts along this line.

"It is desirable for the states to manufacture serum, but neither by the size of the plant nor by the price of the product, should this effort be monopolized by the states.

"The simultaneous treatment should be used only by those who have had special training. The ideal arrangement would be to allow its use only by federal and state veterinary officers. Other officers who have sufficient training in the use of virus, and in sanitation, may use the simultaneous treatment with safety. Where it is not possible to restrict virus to official hands because of shortage of funds or lack of officers, or for other uncontrollable reason, it should then be used only by such other persons as have been given a special permit after receiving special instruction, which is as thorough and detailed as feasible, and who show that they understand the essential fundamental principles. But in any such case, the unofficial layman should be permitted to use virus only in his own herd, and then only if the district is already infected.

"The manufacture, distribution and use of virus should be rigidly supervised by federal and state authorities.

"Quarantine and sanitary measures should be much more actively emphasized and enforced. Especially, it is important that freight cars which have carried infected stock shall be promptly disinfected after unloading, and infected premises should be rigidly quarantined.

"The prevailing practice of rushing sick herds to market should be discouraged in every way possible, and in lieu of such disposal of sick herds, the owners and other persons concerned should be advised and encouraged to treat them with anti-hog cholera serum.

"The promulgation and enforcement of all live stock sanitary regulations and other measures incident to quarantine

should remain invested in the live stock sanitary boards and state veterinarians of the various states.

“Progress in combating hog cholera is being made. Special credit is due to individual efforts on the part of veterinarians and farmers. The intelligent interest of county agricultural agents is commended, and it is believed that these agents should give chief attention to assisting farmers to secure the aid of competent veterinarians, and when that is not possible, they should assist the farmers themselves to take proper remedial measures, always emphasizing the importance of sanitation. There is recommended the temporary assignment of a competent veterinarian by the state government, independently or in co-operation with the federal government, to any district where difficulties on account of hog cholera are most acute, his services to be available to farmers without cost, for the purpose of demonstrating the best methods in different communities.

“Work of the highest character is being done by the United States Bureau of Animal Industry, which Bureau brought out the serum treatment for hog cholera, a treatment which has been adopted in most states and countries where the disease exists. We acknowledge with appreciation the action of Congress, whereby far more liberal provision than even before has been made to investigate and combat the ravages of hog cholera. Similar provision has been made in several states, but the legislatures are urged to make more liberal appropriations of this character.

“There should be the closest co-operation between state and federal authorities, and all persons concerned should be willing to suppress their own opinions on relatively unimportant matters, and follow the lead of federal authorities in the interest of the adoption of uniform methods throughout the entire country.”

Hog Cholera
Statistics.

The following statistics from Federal sources were kindly supplied by Dr. George F. Babb, Inspector of the Bureau of Animal Industry, for this report.

Loss per thousand from cholera.	1912	1913		1912	1913
Florida	170	150	Iowa	160	255
Georgia	165	90	Minnesota	55	214
Alabama	110	100	Nebraska	110	175
Mississippi	154	104	South Dakota....	38	230
Missouri	175	90	All United States.	110	119

Florida's Loss
from Cholera, 1913

135,600 hogs died of cholera.
\$813,600 value of hogs at \$6.00 per head.
13,560,000 pounds hogs lost, 100 pounds per head.
10,848,000 pounds meat and lard lost,
13¼ pounds per head of Florida population.
Third in average loss for 30 years.
First in loss per thousand, 1912.
Fourth in loss per thousand, 1913.
Twenty-third in number of hogs in state.
Sixth in average number of hogs on farm.

Comparison of
Southern States.

	Position in number of hogs	Percent lost 1912	Percent lost 1913	Average number of hogs on farm
South Carolina.....	26th	6.5	6.4	3.8
Florida	23rd	17.	15.	16.2
Alabama	16th	11.	10.	9.7
Mississippi	15th	15.4	10.3	4.7
Georgia	10th	16.5	9.7	3.8

Hog Cholera
Sanitation.

It is conceded that hog cholera is disseminated by a number of ways that can be eliminated by the observance of the ordinary precautions that are taken to control the spread of other diseases.

Some of these dangers to the hog industry are as follows: By pigeons, buzzards and other carrion-eating birds; by dogs; by water courses; by infected pork scraps from hotels; by the owners of sick herds visiting their neighbor's premises, to which hogs have access; by hog-cholera agents who do not take the necessary precautions in disinfecting hands, feet and clothing when leaving an infected herd; leaving the carcasses of hogs, dead from cholera, unburied or unburned, to be eaten by dogs and birds.

These dangers may be entirely removed, or minimized, by burning or burying deeply, all hogs that die from hog cholera; by exterminating buzzards and crows; by keeping the dogs at home; by keeping sick hogs, and hogs that die from cholera, away from water courses; by boiling all scrap and swill fed the hogs; by placarding farms that are infected with hog cholera; by requiring vaccinators to disinfect feet, hands and clothing before coming on one's farm to vaccinate hogs, and by the liberal use of disinfectants and cleaning up the pens, lime being, according to experience, a cheap and reliable substance, when liberally applied to pens and fencing. It is also very important to immediately segregate the sick from the well as soon as cholera is discovered.

In 261 outbreaks of hog cholera, in the State of Indiana, it was determined that the disease was spread by the following agencies:

39 times by owners of well herds visiting diseased herds.....	14.9%
20 times by owners of diseased herds visiting well herds.....	7.7%
16 times by dogs	6.1%
10 times by buzzards	3.8%
36 times by pigeons	13.8%
12 times by purchase of new stock.....	4.6%
28 times by being harbored on premises from previous cases...	10.7%
31 times by sick hogs in pens adjacent to well ones.....	11.9%
14 times by exchange work.....	5.4%
8 times by streams	3.1%
3 times by crows	1.2%
1 time by railroad running through premises.....	0.4%
1 time by hunters.....	0.4%
42 times by ways not determined.....	16.7%

The following mixture is recommended for worms in hogs; being kept before them all the time: Prescription for
worms in hogs.

To prevent worms, keep the following charcoal mixture before the pigs all the time:

Charcoal, 1 bushel,
Hardwood ashes, 1 bushel,
Salt, 8 pounds,
Air slacked lime, 8 pounds,
Sulphur, 4 pounds,
Pulverized copperas, 2 pounds.

First mix the lime, salt and sulphur thoroughly, and then mix in the charcoal and ashes. Dissolve the copperas in 2 quarts of hot water and sprinkle it over the whole mass, mixing

thoroughly. Store this in a barrel under shelter, and keep some of it in an open shallow box where the hogs can get it as they wish.

Transmission of
hog cholera
by buzzards.

It is frequently stated in publications on hog cholera, and it is generally accepted as true, that buzzards are an agency for the spread of the disease.

In 1912, Dr. Hiram Byrd and the writer carried out an experiment to determine if buzzards carry the virus of hog cholera in their feces. The results of this experiment were published in the Annual Report of the State Health Officer, for 1912. We showed that the virus of hog cholera is digested in the intestinal tract of buzzards, and that the droppings of buzzards fed on the flesh of hogs dead from cholera do not produce cholera, when mixed in the feed of hogs. The Louisiana Agricultural Experiment Station has demonstrated that some other germs of disease in farm animals meet a like fate in the intestinal tract of buzzards.

While the buzzard does not carry hog cholera in its droppings, it seems highly probable that the buzzard does carry the virus, not only of hog cholera, but of many other diseases as well, on its feet and feathers, and in its vomitus. To determine the correctness of the views of others, as well as of the writer, the following experiment, approved by the State Health Officer, was carried out: Two high-grade Berkshire pigs, weighing about fifty pounds, were procured from the Florida Agricultural Experiment Station, at which place hog cholera has not existed. They were, therefore, susceptible to hog cholera. The pigs were placed in our new animal house, and were the first animals to occupy the veterinary section of the building. In order to exclude the possibility of the pigs having become infected with hog cholera en route from Gainesville to Jacksonville, they were kept under observation for seven days, during which time they ran a normal temperature, and seemed in normal condition.

Two buzzards were received from Assistant Veterinarian DeMilly, of Tallahassee. These were smeared with hog cholera virus received from State Veterinarian White, of Tennessee, and were then placed in the stall occupied by the pigs. They were kept in association with the pigs three days.

On the second day the birds were removed from the stall and fed meat infected with the Tennessee virus. They were then replaced in the stall, and almost immediately vomited the infected meat. The pigs ate the vomited meat within a few minutes, the boar getting, by far, the larger portion. Therefore, this experiment could only show that the disease is carried by the vomitus, or by the infected feet and feathers. It will be necessary to experiment further to show whether the disease is carried in both ways.

As neither pig died as a result of their association with the buzzards, and as the microbe of hog cholera is unknown, the diagnosis of hog cholera, in this case must be made from the clinical history, which was that of a mild, acute attack of hog cholera of short duration, such as frequently occurs when hogs are vaccinated by the so-called "simultaneous method." A post-mortem examination is, in all cases, absolutely necessary to determine if a hog died of cholera.

The following is the record of the experiment:

May 13, 1914. Two pigs received from the Florida Agricultural Experiment Station, and placed in a stall in the new animal house. Fed on corn, bran and shorts slop. Appetite perfect, and animals appear in perfect health.

May 21, 1914. Two buzzards received from Tallahassee. After being infected with virus of hog cholera, received from Tennessee, were placed in the stall with the pigs. Temperature of boar was 102.6 degrees F., and of the sow, 102.2 degrees F.

May 22nd, 1914. Buzzards were removed from the stall and fed on meat infected artificially with hog-cholera virus, which they ate readily. Buzzards replaced in the stall with the pigs. They soon vomited the infected meat, and the same was eaten by the pigs, the boar getting, by far, the larger share. (It may be remarked here that the ease with which buzzards vomit or regurgitate their food is remarkable, and they do this on the slightest provocation. Handling them will bring about the act. It is probably a provision of nature for lightening their bodies, when it is necessary to suddenly take to flight to avoid danger.)

May 23, 1914. Temperature of boar in the afternoon, 102.3 degrees F.; of the sow, 102.6 degrees F. Buzzards removed, killed and cremated.

May 24, 1914. No observations. (Sunday.)

May 25, 1914. (Fifth day after exposure.) Morning temperature of boar, 102.4 degrees F.; of sow, 103.3 degrees F.

May 26, 1914. (Sixth day after exposure.) Morning temperature of boar 104.6 degrees F. Afternoon temperature, 104 degrees F. Morning temperature of sow, 102.6 degrees F.; afternoon temperature, 103 degrees F. Both animals languid and somewhat "off feed."

May 27, 1914. (Seventh day after exposure.) Morning temperature of boar, 105.2 degrees F. Sow, 102.5 degrees F. Boar refuses all feed. Sow eats. Eyes of both lose lustre.

May 28, 1914. (Eighth day after exposure.) Morning temperature of boar 106 degrees F. Afternoon, 106 degrees F. Morning temperature of sow, 103.5 degrees F. Afternoon temperature, 103.5 degrees F. Boar quite sick, eats nothing, and shows some emaciation. Sow eats.

May 29, 1914. (Ninth day after exposure.) Morning temperature of boar, 103.5 degrees F. Afternoon temperature, 102.4 degrees F. Boar is much improved. Returns to his feed. Morning temperature of sow, 103.2 degrees F. Afternoon 102.7 degrees F. Eat well.

May 30, 1914. (Tenth day after exposure.) Morning temperature of boar, 104 degrees F. Afternoon, 104 degrees F. Morning temperature of sow 103 degrees F. Afternoon temperature, 102.5 degrees F. Both pigs much improved.

May 31, 1914. (Eleventh day after exposure). No observations.

June 1, 1914. (Twelfth day after exposure.) Boar's temperature 102 degrees F. Sow's temperature, 102.2 degrees F.

June 2, 1914. Both pigs seem to have recovered. Both eat well. Boar lost considerable flesh. Sow is in fair condition. Both animals disposed of, as immunes.

The following statistical tables will indicate the activities of the Board in the distribution of hog cholera serum, in 1914:

County	C. C. Serum Distributed	C. C. Virus Distributed	Estimated No. Hogs Treated	Estimated Weight of Hogs Trtd.
Alachua	169,010 c.c.	350 c.c.	6,785	449,250 lbs.
Baker	650 c.c.	... c.c.	33	1,650 lbs.
Bay	750 c.c.	... c.c.	34	2,074 lbs.
Bradford	102,800 c.c.	100 c.c.	4,310	279,899 lbs.
Brevard .....	..... c.c.	... c.c.	.....	..... lbs.
Calhoun	3,250 c.c.	... c.c.	134	9,574 lbs.
Citrus	7,650 c.c.	... c.c.	357	16,980 lbs.
Clay	5,050 c.c.	... c.c.	243	11,672 lbs.
Columbia	33,200 c.c.	... c.c.	1,374	87,984 lbs.
Dade	2,200 c.c.	... c.c.	136	7,640 lbs.
DeSoto	66,050 c.c.	50 c.c.	2,859	183,594 lbs.
Duval	7,700 c.c.	... c.c.	300	21,751 lbs.
Escambia	34,080 c.c.	250 c.c.	1,432	92,268 lbs.
Franklin .....	..... c.c.	... c.c.	.....	..... lbs.
Gadsden	34,000 c.c.	... c.c.	1,437	92,979 lbs.
Hamilton	100,475 c.c.	... c.c.	3,947	262,379 lbs.
Hernando	67,400 c.c.	450 c.c.	2,843	180,336 lbs.
Hillsborough	60,600 c.c.	... c.c.	2,542	146,954 lbs.
Holmes	6,850 c.c.	50 c.c.	296	18,476 lbs.
Jackson	105,965 c.c.	50 c.c.	4,662	246,352 lbs.
Jefferson	6,650 c.c.	... c.c.	295	18,122 lbs.
Lafayette	68,900 c.c.	50 c.c.	3,037	189,615 lbs.
Lake	9,050 c.c.	... c.c.	345	19,900 lbs.
Lee .....	..... c.c.	... c.c.	.....	..... lbs.
Leon	9,750 c.c.	... c.c.	403	34,610 lbs.
Levy	83,650 c.c.	100 c.c.	3,376	189,761 lbs.
Liberty	39,200 c.c.	... c.c.	1,669	98,287 lbs.
Madison	41,000 c.c.	50 c.c.	1,713	113,226 lbs.
Manatee .....	..... c.c.	... c.c.	.....	..... lbs.
Marion	108,800 c.c.	650 c.c.	4,847	273,673 lbs.
Monroe	3,750 c.c.	... c.c.	150	9,750 lbs.
Nassau .....	..... c.c.	... c.c.	.....	..... lbs.
Orange	700 c.c.	... c.c.	17	2,250 lbs.
Osceola	27,700 c.c.	50 c.c.	1,126	76,022 lbs.
Palm Beach.....	..... c.c.	... c.c.	.....	..... lbs.
Pasco	12,200 c.c.	... c.c.	421	28,583 lbs.
Pinellas	3,950 c.c.	... c.c.	176	9,979 lbs.
Polk	22,900 c.c.	50 c.c.	976	60,695 lbs.
Putnam	2,050 c.c.	... c.c.	87	4,900 lbs.
Santa Rosa.....	11,475 c.c.	... c.c.	375	30,765 lbs.
Seminole	500 c.c.	... c.c.	17	1,275 lbs.
St. Johns.....	13,900 c.c.	50 c.c.	539	41,605 lbs.
St. Lucie.....	500 c.c.	... c.c.	22	1,375 lbs.
Sumter	55,600 c.c.	100 c.c.	2,094	144,470 lbs.
Suwannee	141,210 c.c.	200 c.c.	5,765	366,394 lbs.
Taylor	17,000 c.c.	... c.c.	746	48,217 lbs.
Volusia	15,650 c.c.	... c.c.	627	41,956 lbs.
Wakulla	1,500 c.c.	... c.c.	75	3,000 lbs.
Walton	7,500 c.c.	... c.c.	348	18,090 lbs.
Washington	16,410 c.c.	100 c.c.	747	42,984 lbs.
Totals.....	1,529,175 c.c.*	2,700 c.c.†	63,717 hogs‡	3,981,316 lbs.

Distribution of
Hog Cholera
Serum and Virus
in Florida in
1914.

*5,350 c.c. serum sold at cost

†150 c.c. virus sold at cost

‡As hog cholera serum is supplied only by application on standard application blank of the State Board of Health, giving number of hogs to be treated, etc., and as all serum is labeled for immediate use, this number is believed to be fairly accurate as representing hogs treated during 1914.

Tick Eradication
Movement.

Although nothing has been done officially in the actual eradication of the cattle tick, it is evident, on all sides, that the public is becoming more and more familiar with the benefits accruing from the eradication of this parasite. One hears frequently, now, that there is one thing Florida must do, and that is, we must raise more and better cattle and hogs. This Board has already done much in both these lines; but force of circumstances has placed the hog before the cow, because, of the two great diseases affecting these animals, hog cholera and tick fever, the former seems more urgent. The hog requires one year to mature, while the steer requires two or three. The hog is therefore the ready-money animal crop. The wide distribution of the dipping vat in the State, from Pensacola to Miami, shows, however, that the tick-eradication movement, while seemingly dormant, is here to stay. There are fifty of these vats now in the State. There may be several of which we have no record.

Dade County is to be the first Florida county to eradicate the cow tick, even if she is not a cattle county. The movement was initiated there by Dr. J. G. DuPuis, Lemon City, after he had a bitter experience in trying to maintain a decent herd of cattle. He should be highly commended for the enthusiasm with which he has gone ahead and overcome all obstacles and opposition to his plans. The County Commissioners of Dade County, taking advantage of the provisions of the tick-eradication law, appropriated a sum of money, which, added to other subscriptions, will build vats enough to dip every cow in Dade County once every two weeks. As this is the case, it will only take four or five months to eradicate the tick from that county. All the cattle in the county are dairy animals and all the dairymen are in favor of the project. These cattle are all located near Miami, with the exception of a few cows in the other towns located along the railroad. The people there have, at present, nothing to sell out of the county, so their benefits will come only from being able to fetch decent dairy animals into the county, and have them live and thrive the same as they would elsewhere in the world, all things being equal. When it becomes known and appreciated to its full extent that in Dade County good cattle are being

produced on her Everglades prairie land, covered with a heavy growth of good grazing grasses that man has planted there, and that this change has been wrought through the eradication of the cattle tick, Dade County will become as famous for her live stock as she is now for her citrus fruits. Cattlemen from other counties will find it profitable to rent these tick-free pastures, free their cattle of the tick and ship them into Dade County to fatten for the market. From Dade the movement will spread to other counties, and we may then expect Florida to rapidly fall into line with the other States and get rid of this great menace to her cattle industry. Thus we shall see that tick eradication began in Florida, in a county that really had no cattle industry strange as it may seem. Other counties where cattle constitute an important source of income are backward in the movement, showing little or no interest in the matter, and would probably oppose any active plans for tick eradication under approved methods, until convinced that it will pay, in Florida, as it has elsewhere.

The work of vat construction is progressing as fast as weather and other conditions will permit. It is intended to build the half dozen vats that are necessary before starting the work. It is better to start dipping at the onset of warm weather, as that is the time to hit the tick—when it is hatching out on schedule time.

Vat construction.

As soon as the work of dipping commences, this Board will be requested to quarantine all other ticky territory in the United States, and no ticky cattle will be allowed to be shipped, driven or drifted into Dade County. All cattle entering that county must be certified by the proper authorities as having been properly dipped to kill ticks.

This quarantine will remain in force until all other territory in the United States, including Florida, is freed of the tick, and declared to be free by the Secretary of Agriculture.

The State Board of Health has ample authority to proceed with its part of the work and will, no doubt, do so when the people indicate a willingness to have the work started. The question of "getting ready" to eradicate ticks consists only of building the vats. We shall never get ready by writing about it, any more than a farmer plants a crop by

telling his neighbors that he is going to do so. He must prepare the soil and put the seed in the ground. Likewise, we must build the vats, fill them with arsenical solution, and make the cattle swim through them, once, regularly, every two weeks for five months. Then, and not until then, shall we be eradicating ticks in Florida.

Breeders frequently give as a reason for not eradicating ticks from their herds that if they do not raise their stock to be tick-proof, they will die when sold to customers whose other cattle are ticky, and they will, therefore, lose their trade. This is perfectly true, and their reason is a good one; but why not look at the question from another point of view; one that will permit the breeder to raise a better line of breeding stock, under tick-free conditions, to be sold for service in herds that are tick-free. Why allow a disease to exist in our cattle, when it can be so easily and cheaply cured? The important point in the matter is that ticks cause a serious blood disease in cattle. The amount of blood abstracted by the tick is of little importance, when compared with the disease-producing property of the tick.

At the first meeting of the Florida Live Stock Association, a committee was appointed to draft a Constitution and By-Laws for the formation of County Cattle Improvement Clubs that it is intended shall exist in every county in the State. These clubs are expected to be the nucleus around which sentiment for tick-eradication will be developed. This Constitution and By-Laws have been adopted by all the clubs that have been formed. They are as follows:

Constitution.

This organization shall be known as the.....
County Live Stock Club.

Object.

The object shall be the encouragement of Live Stock industry of the County, and to act as a part of the Florida State Live Stock Association.

Methods.

The means by which these beneficial results are to be attained shall be educational, and accomplished by meetings held at stated times, by dissemination of printed information, correspondence, and by securing a proper recognition of the Live Stock Industry from our legislature.

The officers of the Club shall consist of a President, a Vice-President, and a Secretary-Treasurer, who shall be elected annually by the members assembled in convention, and who shall hold office until their successors are properly elected. The election shall be by ballot or majority vote. Officers.

The President, Vice-President and Secretary-Treasurer, shall perform such duties as are usual for such officers. They shall also compose the Executive Committee of the Club.

All white residents of the County, male or female, shall be eligible to membership in this Association upon the payment of an annual fee of \$1.00. Membership.

The Club shall hold an annual meeting each year, at which time election of officers shall take place; and shall hold monthly or quarterly meeting at such times as desirable, upon call by the Executive Committee. Meetings.

1. The annual membership fees of the Club shall be due and payable in January of each year. By-Laws.

2. No member shall be allowed to participate in the business meetings of the Club who is one year in arrears with his annual dues.

3. Changes in the Constitution may be made at any regular meeting by a two-thirds vote of all members present.

4. Seven members shall constitute a quorum for the transaction of business.

5. If any vacancies in office should occur, the President shall fill the vacancy by appointment until the next annual meeting.

6. The place and time of all meetings shall be selected by the Executive Committee.

7. It shall be the duty of the Executive Committee to arrange the program for all meetings.

8. No moneys shall be paid out of the treasury unless authorized by the Executive Committee.

9. At least one-fourth of the dues collected, or such additional proportion as determined by the Club, shall be remitted annually to the Treasurer of the Florida Live Stock Association, for general expenses of State work.

10. Such delegates as requested shall be elected annually to represent the Club at the meetings of the Florida State Live Stock Association.

Glanders.

Florida has been more fortunate this year than last, in having fewer outbreaks of this disease. As against 62 cases, fifty of which occurred in and around Jacksonville, in 1913, there have been only 23 cases in 1914. These were widely distributed; but as in 1913, more cases were found in Duval than in any other county. This should be expected, as more horses and mules come to Jacksonville market than to others. The cost of glanders to the State, in condemnations alone, was \$1,650.00 as against \$5,000.00 in 1913.

The acceptance of the new mallein test and the more general care on the part of the railroads in accepting shipments, added to the regulations adopted by the Board, which require mallein tests to be made upon every horse or mule shipped into the State, is having a salutary effect upon the spread of glanders. With prompt destruction of all open cases, a test of all exposed stock, and the rigid enforcement of our regulations, there is little reason to fear this disease. The people are entitled to the protection afforded by our regulations. They effectually check the pernicious practice of dealing in glandered stock. They protect the dealer, the trader, the farmer, the lumber and turpentine operator. They force the glandered "stuff" back to the man who breeds it on the horse ranches of the West and Northwest. The test, faithfully carried out on all horses, would, in a few years, eradicate this most important disease of the horse.

CASES OF GLANDERS DURING THE YEAR 1914

County	Town	Month	Number Animals	Reimbursement
DeSoto	Brownville	January	One mule	\$75.00
Duval	Jacksonville	January	One horse	75.00
Duval	Jacksonville	January	One horse	75.00
Duval	Whitehouse	January	One horse	75.00
Duval	Jacksonville	February	One horse	75.00
Duval	Jacksonville	February	One horse	75.00
Hillsborough	Tampa	February	Two horses	150.00
Orange	Orlando	February	One horse	75.00
Duval	Marietta	March	One horse	75.00
Duval	Jacksonville	March	One horse	75.00
St. Johns	Durbin	April	Two mules	150.00
Hillsborough	Tampa	April	Two horses, two mules	300.00
Duval	Jacksonville	June	One horse	75.00
Duval	Jacksonville	July	One horse	75.00
Seminole	Sanford	July	One mule	75.00
Duval	Jacksonville	September	One horse	75.00
Putnam	Palatka	September	One horse	75.00
St. Johns	Hastings	November	One horse	
Total			23	\$1,650.00

(Their relation to so-called "Black Tongue" in dogs.)

Hookworm in
dogs.

(This investigation was made in collaboration with Dr. B. M. Bishop, of Holder, Florida, and was published in "Health Notes," October, 1914.)

That the hookworm, *Uncinaria canina*, is a common inhabitant of intestine in dogs and cats is a well known fact. According to Dr. Stiles, *Uncinariasis* is a very common disease in dogs in Washington, D. C., and the same author states that from 25 to 40 per cent of the pups born in some parts of the United States die from hookworm disease. The parasite causes a disease known as "Typhoid" in cats.

Examination of the excrement of dogs in Jacksonville and elsewhere showed an infestation with the eggs and larvae of hookworms. The dogs which furnished the samples were, in most cases, healthy and running at large, while in two cases they were patients in a hospital and being treated for other troubles, presumably.

Recently, a dog owned by one of us died of Black Tongue and was examined, in part, in the bacteriological laboratory, Dr. Hanson, Bacteriologist, assisting in the examination. The bowel showed a heavy infestation of hookworms. The lesions produced by the worms in the bowel were the only noticeable departure from a normal condition of the body.

As this observation was considered of great importance in throwing light upon this mysterious disease, the treatment of several similarly-affected dogs was at once instituted, upon the theory that the disease Black Tongue is an acute form of Uncinariasis. The dogs were given the thymol-salts treatment, with the result that they all recovered, showing the marked improvement noticeable in successfully treated cases in the human being. Both from a pathological and from the sportsman's standpoint, this observation is of great interest, because the disease known as Black Tongue has prevailed here for many years and no theory as to its cause that was worthy of credence has ever before been advanced.

The sportsman and dog owner has realized that this disease is the bane of canine life in Florida. It is hoped that dog owners will take up the question and have their dogs affected with Black Tongue treated for hookworms, according to the plan suggested in this article, and report the results to the State Board of Health.

It may be well to give the symptoms we have found present in what we recognize as Black Tongue.

Symptoms.

The most certain method of diagnosis is the examination of the excrement for eggs and larvae, by the microscope. Those who are not equipped to make this examination may forward a small sample of freshly-voided excrement to the Veterinarian of the State Board of Health, Jacksonville, Fla., with notice of shipment. Send excrement as passed, and not in a liquid. Repeated shipments during treatments will be necessary for determining when the dog is free of the worm.

The most prominent symptom first noticed is paleness of the tongue and other mouth parts; abnormal desire for articles that dogs do not usually eat, such as dirt, clay, manure and other filth. A cough develops. Vomiting is present. Dribbling of saliva occurs throughout the disease. It is thick and ropy, and when mixed with dirt causes a very unclean appearance of the mouth. Champing of the jaws is present, and this causes abrasions of the tongue, which becomes infected, as do the other tissues, and we then note "sore mouth," with loss of appetite and inability to swallow. The breath becomes very offensive, as does also the vomitus and excrement, which

in many cases consist almost solely of blood, mucus and bile. The skin is in the condition known as "hide-bound" in severe cases. There is general weakness of the body, which manifests itself more particularly in the limbs, and this increases, along with other symptoms up to the point of death, which is usually an easy one.

The existence of skin lesions, "ground itch," is not a constant lesion in dogs or in cattle infested with hookworms. This is readily understood when one considers the comparative insensitiveness of the animal hide and of the animal foot.

This should be begun early, before the urgent symptoms have developed, if the best results are to be obtained. Hence, when the dog passes blood and mucus, the excrement should be examined for the eggs and larvae. It may, as in man, require several treatments before the worm is totally eradicated from the animal. Treatment.

Our treatment has been directed to killing the worms by the use of thymol, and then expelling their dead bodies and the ova by the use of salts.

The dog is starved from seven in the morning until seven at night, at which time the first dose of thymol is given, in capsule. Two hours later, this dose is repeated, the dog being kept quiet and fasted till next morning, when a dose of salts is given. After the salts has acted, the dog may be fed anything it will eat, preferably milk, beef tea, etc. Sherry wine may be given as a stimulant, in dessert-spoonful doses. The dose of thymol should not be less than 10 grains for puppies and very small dogs, nor more than 30 to 40 grains for older and larger dogs. The dose of salts will range from 1 to 4 drachms, according to size of animal. If the symptoms do not abate in a few days, four or five, repeat the above doses. Repeat, anyway, in ten days.

Should the European war continue much longer, it is probable the supply of thymol will be discontinued, as it is "made in Germany." To provide a substitute for thymol is a problem that is already being considered. This substitute is the time-honored oil of cenopodium, otherwise known as worm-seed oil. It is even superior to thymol in several ways. It is less poisonous, and stands highest in the scale of anthelmintics.

The coefficients of several worm destroyers are as follows, according to a government report: Eucalyptus oil, 38; naphthol, 68; thymol, 83; oil of chenopodium surpasses them all, with a coefficient of 91.

The plant from which this oil is obtained grows in great profusion in Florida, and is known under the popular name, Jerusalem oak. The expressed juice from the green leaves of the plant is in high favor amongst the colored "mammies" as a worm medicine.

The dose of the oil of chenopodium ranges from 8 to 16 drops, according to age, for people. The same dosage would apply for dogs. The dose is repeated every two hours for three doses. Two hours thereafter, a tablespoonful of castor oil with a teaspoonful of chloroform is given. The oil is best administered on sugar. If unusual depression occurs from the use of the oil, stop it, and stimulate with strong, hot coffee, given by the mouth, or injected into the rectum.

Another method of applying the remedy is to prepare a decoction by boiling one ounce of the fresh plant in a pint of milk or water, and administering this tea in wineglassful doses.

As the resulting anaemia is pronounced, this deserves notice, and a general tonic should be given. The following tonic pill is recommended. Each pill should contain the following amounts of the ingredients, according to age and size of the dog: Ferri reduct., grains 1 to 5; Strych. sulph., grains 1-100 to 1-60; Quin. sulph., grains 1 to 2; Acid arsenosi, grains, 1-30 to 1-10.

In 1902, the writer was called to Newberry to investigate a cattle disease in range animals. The principal symptoms were intense itching about the head, and excitement, which was increased to such an extent by handling, that it was not deemed wise to run further risk of personal injury. It was believed at the time that acute Texas fever having this unusual symptom was the true diagnosis, and the incident was mentioned in my bulletin on Texas Fever, then in preparation, and later issued from the Florida Experiment Station, then located at Lake City.

Since then, the writer has seen and heard of numerous cases of this mysterious disease, and for want of better informa-

After-treatment.

Mad Itch in Domestic Animals.

tion, has generally attributed them to other causes, such as hydrophobia, blind staggers, or forage poisoning, lice and mange.

In 1902 Aujeszky, a Hungarian veterinarian, recognized this affection as a distinct and new infectious disease of the lower animals, of wide distribution, and affecting horses and dogs. Since then other observers have studied the disease in cattle, sheep, goats, dogs and cats. The disease is easily produced by inoculation in rabbits, guinea pigs, mice and rats. Swine, pigeons and fowls are immune to the disease. It is, therefore, remarkable, as a disease of wide pathogenesis.

Aujeszky called the disease Infectious Bulbar Paralysis, or Pseudo-rabies. As neither of these names has been considered satisfactory, the name, Disease of Aujeszky, has been applied, in honor of its discoverer. Since very little is known as to the etiology and pathology of the disease, the name, "Mad Itch," denoting its principal symptom, is tentatively adopted by the writer.

The following symptoms are described briefly, as occurring in the farm animals:

In cattle, there is a constant rubbing of the nose, which causes, first, loss of hair and then the skin, and even flesh. The parts become infected, swollen and boggy. The animal moans in great pain, and strikes the ground with the hind legs. Attempts at handling increase the excitement and suffering. Even the presence of people will cause increase of symptoms, with perspiration and champing of the jaws. Interference with digestion causes bloating, and the animal dies in 36 to 48 hours after the onset of the symptoms.

Dogs have loss of appetite, are melancholy, respond slowly, or not at all to the owner's call. He looks at the part of the body where the infection entered, and barks. He is easily frightened and runs away at the approach of man, while he will fight and bite other dogs, but will not harm man. He will bite nearby objects and try to tear them. The expression of the face is painful. There is dribbling of saliva, and the breathing is loud and difficult. Thirst is a prominent symptom, and the dog drinks ravenously, even though in great pain. At the point where the virus has entered the body, there

is great itching. The skin is bitten and scratched, and when this has been torn away, the underlying flesh is attacked. Even when the dog is dying from exhaustion he will continue to scratch and tear the flesh. While these symptoms suggest rabies or hydrophobia, the microscopic examination of the brain will not disclose the presence of the Negri bodies, which are always found in certain parts of the brain, in rabid animals.

In horses and mules, the disease also greatly resembles rabies, and blind staggers or forage poisoning. The predominating symptoms are the intense itching and rubbing against objects until the skin and flesh are worn away. Excitement and nervous irritability may not be present, in all cases, but violent itching and often throat paralysis, are present. There can be little doubt that many outbreaks of so-called blind staggers or forage poisoning formerly diagnosed as such in Florida, were, in reality cases of this disease. Likewise, in dogs, where the examination of the brain might fail to reveal the presence of Negri bodies, even though the clinical history pointed to the existence of rabies, we would have to do with this disease.

The following letter recently received from a gentleman living in the southern part of the State, describes this disease, as it occurs in the mild form, in horses and mules:

"A number of people in this vicinity have mules troubled with a disease or infection of the skin that causes them constant worry and annoyance, and allowing very little rest during the night. I personally consulted a veterinarian, but was unable to get any satisfactory information, and many have tried various remedies, only to meet with failure to relieve their suffering animals.

"I have watched the case on my own mule, and find the symptoms about as follows: First appearance is about the face and ears, then the head, generally rubbing the hair off the face until almost bared, also rubs hair off the back and out of the ears. Later I noticed places on the side of the neck, usually near the mane that the hair and skin had been rubbed off by scratching with the hind hoof, causing a raw sore that has always healed without giving any trouble. From the neck the trouble spreads to the back along and near the

spinal column and finally to the tail. I have seen my mule biting the back viciously, tearing the hair and skin out in chunks, apparently. I have also noticed that when working the animals near patches of grass, more particularly maiden cane, they are attacked by a midget fly, that seems to be a sucking insect not more than one thirty-second of an inch in length, which attacks them in great numbers. After these attacks, the mules seem to suffer for several days, rubbing and biting more vigorously at first and less as they seem to become exhausted."

The cause of this disease being unknown, we are at a loss to know how to treat it. It is evidently a disease of the nervous system, akin to rabies, and it may be that the presence of the causative agent will be discovered, as in rabies; hence we may expect that a vaccine will be prepared, although efforts along this line have failed in the past. The cause is attributed by some as being the volatile oils from certain plants, such as poison ivy. The occurrence of the disease in animals that do not eat plants, and the ease with which it is produced, in experimental animals, by inoculation of the blood serum, and the brain matter of infected animals, dispels this idea, and proves conclusively its infectiousness.

To relieve the urgent symptoms, anti-pruritic lotions at once suggest themselves, as do purgatives, assuming the animals may have eaten plants containing irritant poisons having a direct action upon the skin. Hence, the treatment advised by Dr. C. A. Cary, of the Alabama Experiment Station, is here given. He says: "I advise that owners of animals affected with itching disease apply freely and frequently early in its course, one per cent solutions of permanganate of potash or iron sulphate (one per cent in water) solution, two or three times a day. Also give to cattle, horses and mules one to two pounds of Epsom Salts in one to two pints of water to remove from the alimentary canal any of the plants that may have been swallowed. Or use one to two pints of raw linseed oil, olive oil, castor oil or warm lard."

Regulations Governing the Entry of Domestic Animals into Florida, Adopted by the Board, July 28, 1914, and Made Effective September 1, 1914.

Live Stock Importation Regulations.

Regulations governing the entry of Domestic animals into Florida.

SECTION 1. The importation by railroad, boat, in wagon, by express or other common carrier, on hoof or in any other manner, of live stock diseased or exposed to disease into the State of Florida is hereby prohibited; and to determine which fact the following regulations shall be observed by all persons, firms, transportation companies, corporations, express companies and other common carriers, State Veterinarians and all other state officials authorized to inspect and issue certificates of health for live stock.

SEC. 2. Any person, firm or corporation or any common carrier wishing to bring or transport into the State of Florida (1) bulls, work oxen or female cattle over six months old, not intended for immediate slaughter, or (2) horses, mules or asses, or (3) hogs or swine, must procure before shipment a health certificate, in triplicate, from a Veterinary Inspector of the Bureau of Animal Industry of the United States or from the State Veterinarian or an Assistant State Veterinarian of the State of shipment or from a Licensed Veterinarian whose competency, reliability and official character are certified to in writing by the State Health Officer or authorities charged with the control of diseases of domestic animals in the state from which such animals are to be transported or moved. The original of said health certificate and of all other certificates, if any, must be attached to the waybill. A duplicate or counterpart of said health certificate and of all other certificates must be sent by the shipper to the Veterinarian of the State Board of Health of Florida at Jacksonville, Florida, in ample time to reach him not less than two (2) days before the arrival of said animals at the point of destination in the State of Florida. A third counterpart or triplicate of said health certificate and of all other certificates must be sent in like manner and at the same time to the State Veterinarian or other competent official or authority of the state in which shipment originated.

In the case of shipments of bulls, work oxen or female cattle over six months old, not intended for immediate slaughter, all such shipments must also be accompanied by a tuberculin test chart in triplicate, signed by any one of the officers authorized to sign such health certificates, which tuberculin test chart and said health certificate must show that such cattle are

free from tuberculosis and all contagious, infectious and communicable diseases. Said tuberculin test chart must also show that at least three temperatures were taken before the injection of tuberculin, two to three hours apart, and that five temperatures were taken after injection, two hours apart, beginning ten hours after tuberculin was injected.

In the case of horses, mules or asses, said shipment shall also be accompanied by triplicate mallein test charts which test chart and health certificate must show that such horses, mules or asses are free from all contagious infectious and communicable diseases, and the test charts must show (if the subcutaneous method was used) that at least three temperatures, two to three hours apart, were taken before injection, and that five temperatures were taken after injection, two hours apart, beginning ten hours after the mallein was injected. When the ophthalmic method of testing for glanders is employed, the temperature should be taken twice, first at the time of applying the mallein to the eye, and second when the reaction is being judged.

The tuberculin test chart or mallein test chart, as the shipment may require, must be made out and delivered in triplicate, one copy of which shall accompany the corresponding copy of the health certificate and be sent at the same time and to the same persons as above required in respect to the health certificate.

In the case of hogs and swine, the health certificate must show that the swine are free from all contagious, infectious and communicable diseases, and that they have been immunized against hog cholera by the Dorset-McBryde-Niles serum not more than thirty (30) days prior to the shipment. If the hogs or swine have been immunized by the "serum-simultaneous method," the certificate must show that they were so immunized at least 30 days prior to shipment.

SEC. 3. That cars, boats and other vehicles used in the transportation of all live stock into or within the State of Florida shall first be cleaned of all litter, washed and disinfected with a mixture made with not more than one and one-half ($1\frac{1}{2}$) pounds of lime and one-quarter ($\frac{1}{4}$) of a pound

Veterinary
Inspectors.

of pure carbolic acid to each gallon of water or liquid cresolis compositus (U.S.P.) six (6) ounces to every gallon of water.

The increasing demand upon the Board for the services of a veterinarian, especially in making inspection of animals for shipment out of the State, has made it necessary to resort to the same methods as are used in other States, to meet this demand. Accordingly, it has become a policy to appoint all known graduate veterinarians, of good standing, as veterinary inspector for the State.

The duties of these men consist in writing bills of health, and making mallein tests of horses and mules that are to be removed to another State, this being now required by most States. The inspectors serve without pay from the State Board of Health, their fees being paid by the owners of the animals inspected. They use the Board's regular shipping blanks, and are certified to the State Veterinarians of the various States as being authorized to certify to shipments. They are not permitted to ship cattle, as the cattle quarantine makes it impractical to utilize their services for that purpose.

The State thus gets the free service of a large force of veterinarians and the public gets prompt and efficient service which permits of the prompt forwarding of their shipments.

For list of these inspectors, see page 193, Organization of the Veterinary Division.

Movement of Animals Into and Out of the State Since the Adoption of the Foregoing Regulations, September 1, 1914.

Shipments of Certified Live Stock into Florida, September, 1914:

- 14 horses from Clearmont, Wyoming, to Cocoa, Fla.
- 1 horse from Kentucky to Jacksonville, Fla.
- 1 pony from Havana, Cuba, to Key West, Fla.
- 7 horses, 2 mules from Atlanta, Ga., to Lake City, Fla.
- 1 cow from Valdosta, Ga., to Fort Lauderdale, Fla.
- 34 mules, 4 horses from Atlanta, Ga., to Miami, Fla.
- 3 mules, 25 horses from Chicago, Ill., to Live Oak, Fla.
- 4 horses from W. Liberty, Ill., to Delray, Fla.
- 3 horses, 2 cows, from Louisville, Ky., to Orlando, Fla.
- 3 mules, 3 horses, from Muscatine, Tenn., to Lakeland, Fla.
- 3 horses, 5 mules from Atlanta, Ga., to Winter Garden, Fla.
- 2 mules from Kirkwood, Mo., to Vero, Fla.
- 4 horses from Greeneville, Tenn., to Wauchula, Fla.
- 1 hog from Baton Rouge, La., to Pensacola, Fla.
- 2 horses from Shelbyville, Ky., to Leesburg, Fla.

7 horses from Atlanta, Ga., to Tampa, Fla.	
15 horses, 15 mules from Paducah, Ky, to Titusville, Fla.	
Total number certified horses shipped into Florida, September....	93
Total number certified mules shipped into Florida, September.....	64
Total number certified cows shipped into Florida, September.....	3
Total number certified swine shipped into Florida, September.....	1
Grand total number certified animals shipped into Florida during September, 1914.....	161

Shipment of Certified Live Stock from Florida, September, 1914:

9 horses, 2 mules Tampa, Fla., to Memphis, Tenn.	
2 mules Jacksonville, Fla., to Oconto, Nebraska.	
40 cattle Jacksonville, Fla., to Columbia, S. C.	
44 cattle Jacksonville, Fla., to Columbia, S. C.	
40 cattle Jacksonville, Fla., to Columbia, S. C.	
40 cattle Jacksonville, Fla., to Columbia, S. C.	
34 cattle Jacksonville, Fla., to Columbia, S. C.	
Total number certified horses shipped from Florida, September...	9
Total number certified mules shipped from Florida, September....	4
Total number certified cattle shipped from Florida, September...	198
Grand total number certified animals shipped from Florida during September, 1914.....	211

Shipments of Certified Live Stock into Florida, October, 1914:

October 3, Atlanta, Ga., to Lake City, Fla.....	19 horses	6 mules
October 3, Glasgow, Mont., to Jacksonville.....	61 horses	
October 4, St. Paul, Neb., to Kissimmee.....	10 horses	17 mules
October 4, Paducah, Ky., to Titusville.....	15 horses	15 mules
October 8, Grand Island, Neb., to Tampa.....	24 horses	
October 8, Atlanta, Ga., to Eustis.....	23 horses	
October 9, Atlanta, Ga., to Palatka.....	14 horses	12 mules
October 9, Atlanta, Ga., to St. Augustine.....	15 horses	18 mules
October 10, St. Louis, Mo., to Miami.....	3 horses	
October 10, St. Louis, Mo., to Miami.....	31 cows	
October 11, Brookville, Ind., to Narcoossee.....	2 horses	
October 12, St. Louis, Mo., to Ft. Lauderdale.....	4 horses	
October 12, Pewaukee, Wis., to Delray.....	3 horses	
October 13, Atlanta, Ga., to Miami.....		12 mules
October 13, Chicago Ill., to Tampa.....	20 horses	
October 14, Chicago, Ill., to Lakeland.....	7 horses	13 mules
October 14, Chicago, Ill., to Live Oak.....	27 horses	
October 14, Porterdale, Ga., to Green Cove Springs		
	2 bulls	
October 14, Wauben, Ga., to Evinston.....	2 cattle	
October 15, Nedge, Tenn., to Terra Ceia.....		2 mules
October 17, Chicago, Ill., to Live Oak.....	17 horses	6 mules
October 18, DeLand, Ill., to Live Oak.....		4 mules
October 18, Crookston, Neb., to Winter Haven....	22 horses	
October 18, Hillsborough, Kans., to Fellsmere		
	2 cows 13 horses	9 mules
October 21, Atlanta, Ga., to Lake City.....	12 horses	3 mules
October 21, Woodlake, Neb., to Ft. Meade.....	3 horses	1 mule
October 21, Huntington, W. Va., to Huntington...		
	3 cows	

October 22, Huntington, W. Va., to Huntington...	2 horses	
October 23, Huntington, W. Va., to Jacksonville...	1 horse	
October 23, Woodberry Heights, N. J., to Harwood	1 horse	
October 24, Atlanta, Ga., to Ft. Pierce.....	16 horses	12 mules
October 26, Oakdale, Tenn., to Zolfo.....	2 horses	
October 27, Paducah, Ky., to Florida.....	2 horses	3 mules
October 27, Troy, Pa., to Little River.....	2 horses	
October 28, Ludlow, Ky., to Miami.....	1 horse	
October 28, Atlanta, Ga., to Miami.....	2 horses	16 mules
October 29, Havana, Cuba, to Tampa.....	4 horses	
October 30, Atlanta, Ga., to Jacksonville.....	6 horses	19 mules
October 30, Ramsey, Ind., to St. Cloud.....	2 horses	
October 30, Leesburg, Mo., to Lake Worth..	1 cow 1 horse	3 mules
Total: 357 horses; 173 mules; 37 cows; 2 bulls, 2 cattle.....		571
Total number of shipments.....		40

Shipments of Certified Live Stock from Florida, October, 1914:

October 13, Branford, Fla., to Charleston, S. C.....	109 cattle
October 20, Jacksonville, Fla., to Columbia, S. C.....	39 cattle
October 21, Tampa, Fla., to Danville, Ky.....	1 horse
October 30, Jacksonville, Fla., to Columbia, S. C.....	40 cattle
October 30, Jacksonville, Fla., to Blythewood, S. C.....	41 cattle
Total: 229 cattle; 1 horse.....	230
Total number of shipments.....	5

Shipments of Certified Live Stock into Florida, November, 1914:

Nov. 1, Carthage, N. Y., to Narcoossee.....	1 bull
Nov. 1, National Stock Yards, Ill., to Madison....	18 horses 9 mules
Nov. 3, National Stock Yards, Ill., to Palatka....	22 horses 1 mule
Nov. 4, Oklahoma City, Okla., to Lake City.....	25 horses
Nov. 5, Chattanooga, Tenn., to White Springs....	2 horses 2 mules
Nov. 6, Atlanta, Ga., to Jacksonville.....	6 horses 19 mules
Nov. 6, Evansville, Ind., to Parish.....	3 horses 2 mules
Nov. 6, New Orleans, La., to Wauchula.....	2 horses
Nov. 6, Atlanta, Ga., to Miami.....	4 horses 20 mules
Nov. 7, New Orleans, La., to Arcadia.....	2 pigs
Nov. 8, District of Columbia to Punta Gorda....	1 horse
Nov. 8, District of Columbia to Baywood.....	2 horses
Nov. 8, District of Columbia to Baywood	1 bull, 1 cow
Nov. 8, Atlanta, Ga., to Live Oak.....	20 horses 6 mules
Nov. 10, Belmar, N. J., to Orlando.....	1 horse
Nov. 10, Atlanta, Ga., to Lake City.....	2 horses 14 mules
Nov. 11, Kansas City, Mo., to Fort Myers.....	4 horses 1 ass
Nov. 12, National Stock Yards, Ill., to Palatka....	18 horses 4 mules
Nov. 12, Atlanta, Ga., to Palatka.....	8 horses 17 mules
Nov. 13, Atlanta, Ga., to Jacksonville.....	12 horses
Nov. 14, Atlanta, Ga., to West Palm Beach.....	10 mules
Nov. 17, Mooreland, Okla., to Kissimmee.....	2 mules
Nov. 19, Enid, Okla., to Wauchula.....	6 horses
Nov. 19, Columbus, Miss., to Arcadia.....	3 mules
Nov. 20, Atlanta, Ga., to Jacksonville.....	6 horses 18 mules
Nov. 21, Easton, Ill., to City Point.....	1 horse

Nov. 21, Tamaroa, Ill., to Morrilton.....	4 horses	5 mules
Nov. 22, Atlanta, Ga., to Newburn.....	1 horse	
Nov. 24, National Stock Yards, Ill., to Live Oak...		28 mules
Nov. 27, Butler, Mo., to Miami.....	2 swine, 1 cow	2 horses
Nov. 28, Plainview, Neb., to Bradentown.....	3 horses	
Nov. 28, St. Paul, Neb., to Kissimmee.....	23 horses	4 asses
Total: 196 horses; 160 mules; 2 cows; 2 bulls; 5 asses; 4 swine....	369	
Total number of shipments.....	32	

Shipments of Certified Live Stock from Florida, November, 1914:

Nov. 16, Jacksonville to Selma, Ala.....	1 mule
Nov. 26, Tampa to Washington, Ga.....	1 mule
Total.....	2 mules

Shipments of Certified Live Stock into Florida under Importation Regulations of the State Board of Health, December, 1914:

Dec. 1, Atlanta, Ga., to DeLand.....		11 mules
Dec. 1, Atlanta, Ga., to Bradentown.....	3 horses	
Dec. 1, Altoona, Ala., to Lane Park.....	1 horse	4 mules
Dec. 1, Kansas City, Mo., to Fort Myers, Fla.....		24 mules
Dec. 1, Yukon, Okla., to Nocatee.....	2 horses	
Dec. 1, District of Columbia, to Jupiter.....		1 mule
Dec. 1, Baton Rouge, La., to Live Oak.....	2 swine	
Dec. 2, Dawson, Ga., to Jacksonville.....	5 horses	20 mules
Dec. 3, Atlanta, Ga., to Palatka.....	11 horses	13 mules
Dec. 3, Chicago, Ill., to Bostwick.....	3 horses	
Dec. 5, Kansas City, Mo., to Fellsmere.....	1 horse	2 mules
Dec. 5, Atlanta, Ga., to Jacksonville.....	1 horse	19 mules
Dec. 7, Atlanta, Ga., to Buena Vista.....	1 horse	
Dec. 8, Atlanta, Ga., to Lake City.....	3 horses	18 mules
Dec. 8, Enid, Okla., to Altamonte Springs.....	1 horse	1 mule
Dec. 9, Atlanta, Ga., to Lake City.....	4 horses	16 mules
Dec. 9, Amarillo, Texas, to Orange Center.....	2 horses	
Dec. 9, Atlanta, Ga., to Jacksonville.....	4 horses	6 mules
Dec. 10, Columbia, Tenn., to Orlando.....	1 horse	
Dec. 10, Chattanooga, Tenn., to Arcadia.....		2 mules
Dec. 11, Chattanooga, Tenn., to Lake Worth.....		1 mule
Dec. 12, Atlanta, Ga., to Jacksonville.....	1 horse	
Dec. 14, Springfield, Ohio, to West Palm Beach...	2 horses	
Dec. 15, District of Columbia, to Daytona.....	5 horses	
Dec. 15, Atlanta, Ga., to Miami.....	2 horses	22 mules
Dec. 15, Centralia, Mo., to Lake Worth.....	1 cow	3 horses
Dec. 15, Atlanta, Ga., to Palatka.....	14 horses	9 mules
Dec. 16, Atlanta, Ga., to Daytona.....	1 horse	
Dec. 17, New Orleans, La., to Summerfield.....	2 horses	
Dec. 17, Atlanta, Ga., to Miami.....	9 horses	14 mules
Dec. 18, Indianapolis, Ind., to Fort Myers.....	22 horses	
Dec. 18, Atlanta, Ga., to Fort Myers.....	1 cow	2 mules
Dec. 19, Atlanta, Ga., to Arcadia, Fla.....		4 mules
Dec. 21, Atlanta, Ga., to Fort Myers.....	4 horses	
Dec. 21, Smithland, Ky., to Titusville.....		5 mules
Dec. 21, Henderson, Tenn., to Inverness...	2 swine	
Dec. 21, Charleston, S. C., to Tampa.....	3 horses	
Dec. 21, Murfreesboro, Tenn., to Florahome	1 swine	
Dec. 22, St. Louis, Mo., to Umatilla.....	1 horse	2 mules

Dec. 22, National Stock Yards, Ill., to Madison....	30 mules
Dec. 22, Easton, Md., to Winter Park.....	2 horses
Dec. 24, Abiline, La., to Miami.....	1 horse
Dec. 24, Knoxville, Tenn., to Tampa.....	1 horse
Dec. 25, Sonora, Ky., to Live Oak.....	26 mules
Dec. 27, Oklahoma City, Okla., to Lake City.....	4 horses 25 mules
Dec. 28, Lynn, Ind., to Green Cove Springs	1 swine
Dec. 29, Atlanta, Ga., to Lake City.....	5 horses 14 mules
Dec. 30, Atlanta, Ga., to Jacksonville.....	16 mules
Dec. 31, Spring Hill, Tenn., to Dade City.....	3 horses
Dec. 31, Petersburg, Va., to Leesburg.....	1 horse
Dec. 31, Crookston, Neb., to Winter Haven.....	3 horses
Total: Horses 132; Mules, 307; Cows 2; Swine 6.....	447
Total number of shipments.....	52

Shipments of Certified Live Stock from Florida, December, 1914:

Dec. 4, Jacksonville, Fla., to Spartanburg, Ga.....	1 horse
Dec. 21, Jacksonville, Fla., to Savannah, Ga.....	1 horse
Dec. 24, Tampa, Fla., to Charleston, S. C.....	1 horse
Total.....	3 horses

Movement of Certified Animals into and out of the State last Quarter, 1914

Total number of horses brought into State during last quarter of 1914.....	685
Total number of mules brought into State during last quarter of 1914.....	640
Total number of horses shipped out of State during last quarter of 1914.....	4
Total number of mules shipped out of State during last quarter of 1914.....	2
Total number of cattle shipped into State during last quarter of 1914.....	47
Total number of cattle shipped out of State during last quarter of 1914.....	229
Grand total of certified animals, shipped into State during last quarter of 1914, including 5 asses and 10 swine.....	1387
Grand total of certified animals shipped out of State during last quarter of 1914.....	235

FLORIDA LIVE STOCK ESTIMATES FOR FIVE PAST YEARS.

The Bureau of Crop Estimates in co-operation with the Weather Bureau, United States Department of Agriculture, makes the following estimates for the years, 1911, 1912, 1913, 1914 and 1915:

Horses	Number	Value per head
January 1, 1911.....	49,000.....	\$113.00
January 1, 1912.....	52,000.....	106.00
January 1, 1913.....	53,000.....	118.00
January 1, 1914.....	55,000.....	122.00
January 1, 1915.....	57,000.....	121.00

Mules		
January 1, 1911.....	24,000.....	161.00
January 1, 1912.....	25,000.....	154.00
January 1, 1913.....	26,000.....	152.00
January 1, 1914.....	27,000.....	168.00
January 1, 1915.....	28,000.....	163.00

Milch Cows		
January 1, 1911.....	118,000.....	35.00
January 1, 1912.....	123,000.....	33.50
January 1, 1913.....	123,000.....	36.00
January 1, 1914.....	128,000.....	38.00
January 1, 1915.....	133,000.....	42.50

Other Cattle		
January 1, 1911.....	736,000.....	12.40
January 1, 1912.....	758,000.....	13.10
January 1, 1913.....	766,000.....	12.20
January 1, 1914.....	735,000.....	13.70
January 1, 1915.....	735,000.....	14.50

Sheep		
January 1, 1911.....	119,000.....	1.99
January 1, 1912.....	120,000.....	2.10
January 1, 1913.....	119,000.....	2.10
January 1, 1914.....	118,000.....	1.90
January 1, 1915.....	119,000.....	2.20

Swine		
January 1, 1911.....	867,000.....	4.60
January 1, 1912.....	954,000.....	5.20
January 1, 1913.....	878,000.....	5.90
January 1, 1914.....	904,000.....	6.00
January 1, 1915.....	949,000.....	6.00

Miami Dairy
Ordinances.
Rules and
Regulations.
Ordinance 157.

An Ordinance Amending Section 5 of "An Ordinance to Provide for the Inspection of Milk, Dairies and Dairy Herds and to License and Regulate the Sale and Disposition of Milk in the City of Miami, Florida, and Providing a Penalty for its Violation.

Be it Ordained by the City Council of the City of Miami, Florida:

SECTION 1. That Section 5 of "An Ordinance to provide for the inspection of milk, dairies and dairy herds and to license and regulate the sale and disposition of milk in the City of Miami, Florida, and providing a penalty for its violation," be amended to read as follows:

SEC. 5. Upon the filing of the application with the Health Officer as provided in Section 2 of this ordinance, said Health Officer or his authorized inspector or Veterinarian, acting under his instructions, shall proceed without unnecessary delay to inspect the dairy and dairy herd of such applicant or the dairy and dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk for sale or distribution within the corporate limits of the City of Miami, and it shall be the duty of the said Health Officer to make or cause to be made under his direction and supervision, examination and inspection not only of each and every animal producing milk for sale or consumption within the corporate limits of the City of Miami belonging to or controlled by the said applicant or the person from whom said applicant obtains or is to obtain his milk, but also of each and every cow, heifer, bull, steer or calf over the age of six months in the dairy or dairy herd of such person or that is maintaining upon the premises upon which is located the dairy or dairy herd of the applicant or of the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of detecting the presence or absence of tuberculosis or any other contagious or infectious disease.

And the applicant shall file with the Health Officer a certificate of tuberculin test, which test shall have been applied by a graduate veterinarian. In the case of new animals entering the dairy herd of the applicant, or the dairy herd of the

person or persons from whom the applicant obtains his milk, the owner shall file with the Health Officer a certificate of tuberculin test from the State Veterinarian of the State in which the cattle originate, or his duly authorized deputy, or a Veterinary Inspector of the Bureau of Animal Industry, United States Department of Agriculture. And such certificate of tuberculin test shall be accepted by the Miami Board of Health as evidence that the necessary tuberculin tests have been applied and that the animals so tested are free from tuberculosis.

SEC. 2. All ordinances or parts of ordinances in conflict herewith be and the same are hereby repealed.

Passed and adopted this 19th day of October, 1914.

An Ordinance to Provide for the Inspection of Milk Dairies and Dairy Herds and to License and Regulate the Sale and Disposition of Milk in the City of Miami, Florida, and Providing a Penalty for its Violation.

Be it Ordained by the City Council of the City of Miami:

SECTION 1. That from and after the passage and approval of this ordinance, no person shall engage in the sale of milk, cream or buttermilk within the City of Miami, without first having obtained a license so to do in the manner hereinafter provided.

SEC. 2. Any person desiring a license to engage in the sale and disposition of milk, as provided in Section 1 hereof, shall first make application therefor in writing to the Health Officer of the City of Miami, which said application shall set forth with reasonable exactness, the name and place of the residence of the applicant, the exact location or place from which the applicant obtains or is to obtain his milk, and if the applicant is not a producer of milk, then the name of the person or persons from whom he obtains or is to obtain his milk for sale or distribution, and if said applicant is a producer of milk, the number of cows in his dairy herd; the said applicant shall further set forth the manner in which the applicant intends to dispose of his milk when licensed according to the provisions of this ordinance and shall be signed by the applicant

and when received by the Health Officer shall be placed on file and the name of the applicant shall be registered in a book of registration kept for such purpose.

SEC. 3. The filing of the application provided for in the next preceding section shall authorize the applicant to engage in the sale or disposition of milk and to continue in the prosecution of that business if he shall, at the time of the filing of the application, be engaged in the business of selling or distributing milk, until the Health Officer takes action thereon and either issues a license to the applicant or refuses so to do.

SEC. 4. Any applicant, or any person from whom such applicant obtains or is to obtain his milk, shall permit the Health Officer of the City of Miami, or his duly authorized inspector or veterinarian to inspect the dairy or dairy herd of such applicant or the dairy and the dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk, together with all appliances and milk vessels used therein, and any refusal upon the part of such applicant or upon the part of the persons from whom such applicant obtains or is to obtain his milk to permit the inspection above referred to shall be deemed as sufficient ground upon which the Health Officer may refuse to issue the license applied for.

SEC. 5. Upon the filing of the application with the Health Officer as provided in Section 2 of this ordinance, said Health Officer or his authorized inspector or Veterinarian acting under his instructions, shall proceed without unnecessary delay to inspect the dairy and dairy herds of such applicant or the dairy and dairy herd of the person or persons from whom the applicant obtains or is to obtain his milk for sale or distribution within the corporate limits of the City of Miami, and it shall be the duty of the Health Officer to make or cause to be made under his direction and supervision, examination and inspection not only of each and every animal producing milk for sale or consumption within the corporate limits of the City of Miami belonging to or controlled by the said applicant or the person from whom said applicant obtains or is to obtain his milk, but also of each and every cow, heifer, bull, steer or calf over the age of six months in the dairy or dairy herd of such person or that is maintained upon the premises upon which is located the

dairy or dairy herd of the applicant or if the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of detecting the presence or absence of tuberculosis or any other contagious or infectious disease, and said Health Officer or his authorized Veterinarian, acting under his direction and supervision in making such inspection and examination is hereby authorized to use what is commonly known as the tuberculin test as a diagnostic agent for the detection of tuberculosis.

SEC. 6. After such examination and inspection of the dairy and dairy herds, as in the next preceding section provided, an authorized agent of the Health Officer of the City of Miami shall tag each animal so examined, which tag shall be of such character as to afford a permanent record of such examination, nor shall such tag be altered, mutilated or removed by any one other than an authorized agent of the Health Department of the City of Miami and the result of the same as regards the presence or absence from any infectious or contagious disease or any other objectionable condition liable to affect the wholesomeness of milk supply shall be reported to the Health Officer, and the inspector shall also state in such report what disposition if any has been made by the applicant or the person or persons from whom the applicant obtains or is to obtain his milk, of the animals which were found to be affected with tuberculosis or any other contagious or infectious disease or any other objectionable condition liable to affect the wholesomeness of milk supply if any there were, and whether or not any animals so affected are used by the applicant or the person or persons from whom the applicant obtains or is to obtain his milk for the purpose of sale or distribution or consumption within the corporate limits of the City of Miami.

SEC. 7. The Health Officer shall thereupon after due consideration of such report judge and determine whether the applicant may be entitled to obtain a license for the sale and distribution of milk within the corporate limits of the City of Miami, which said license shall be numbered and signed by the Health Officer and a record thereof shall be kept in the book of registration provided for Section 2 of this ordinance, and said license shall be valid and effective for the period of one

year from and after date of its issuance and no longer. The dairy herd and all cattle upon the premises shall be tested for tuberculosis once each year. In case reacting animals are found they shall be removed from the herd and the remaining non-reacting animals shall be re-tested within six months after date of first test.

SEC. 8. Each licensee shall cause his name and his place of business and the number of his license to be legibly placed in a conspicuous place on the outside of all wagons or other vehicles used by him in the sale or distribution of milk within the corporate limits of the City of Miami, and all licensees who sell milk from stores or shops shall keep their licenses constantly posted in a conspicuous place upon the wall of the room within which said sale of milk is prosecuted or carried on.

SEC. 9. No persons shall offer or expose for sale or sell or distribute or deliver for the sale or consumption any unclean, impure, unhealthful or unwholesome or adulterated milk, and no person shall keep animals for the production of milk for sale or distribution within the corporate limits of the City of Miami, in or upon premises which are in an unfit or unclean condition from any cause whatever; nor shall any person draw or suffer to be drawn milk from animals which are themselves in an unfit or unclean condition or from animals which are affected with tuberculosis or any other form of disease or any other objectionable condition liable to affect the wholesomeness of the milk supply or from animals which are fed on any other than sound and wholesome food or upon any form of food which is calculated to produce milk which is unhealthy or unwholesome or from animals which are supplied with water which is impure and unwholesome, nor shall any person keep or suffer to be kept any milk or milk product intended for sale or distribution within the City of Miami in unfit or unclean vessels, nor in any unfit or unclean room or building or in any room or building used as a sleeping apartment or for any other purpose incompatible with the proper preservation of the cleanliness, wholesomeness or healthy condition of the milk or milk vessels kept therein, nor must milk be transferred from cans or bottles or other vessels on streets or in any other place than that properly fitted for the handling of milk and all milk thus kept or handled

or produced is hereby declared to be unclean, impure, unhealthy or unwholesome within the meaning of this section, and any milk which is shown by analysis to contain a preservative or any other substance or substances of any character whatever not natural or normal constituents of milk or to have been deprived either wholly or in part of any constituent naturally or normally contained in milk, or which is shown to contain more than 88 per cent of water fluids or less than 12 per cent of milk solids of which not less than $3\frac{1}{2}$ per cent shall be fat, is hereby declared to be adulterated within the meaning of this section, and any such unclean, impure, unhealthy, unwholesome or adulterated milk may be seized and confiscated by the Health Officer or his duly appointed inspector.

SEC. 10. No cream which is adulterated or that shall contain less than 20 per cent of the fat shall be brought into the City of Miami or held, kept or sold or offered for sale in said City, nor shall any one keep or offer for sale in said City, any such cream. The term "cream" means the fatty portions of pure milk which rise to the surface when milk is left at rest or which are separated by other means. The term "cream" which is adulterated, as used in this section means any cream to which any foreign substance has been added.

SEC. 11. No person shall, within the corporate limits of the City of Miami, have in his possession with intent to sell, offer or expose for sale or sell or deliver for sale or consumption in any store or place of business or from any wagon or other vehicle used in the distribution or sale of milk, any milk from which the cream has been removed or milk commonly known as skimmed milk, without first marking the can or package containing said milk, and from which said milk is delivered to the purchaser or customer with the words "skimmed milk" in large plain letters, each letter being at least one inch high and one-half inch wide and to be placed in such position as to be easily seen when such milk is sold or delivered.

SEC. 12. In order to carry out the provisions and purposes of this ordinance, the Health Officer, his inspectors, veterinarian or other employee acting under his direction and

supervision shall have the right at any and all times to enter upon or in the premises of any person licensed under the provision of this ordinance to examine and inspect the dairy and dairy herd of such licensee or to stop and inspect or cause to be inspected any wagon or other vehicle used in delivering milk, or any store, depot, shop, creamery or any place where milk is offered for sale or sold, and to appropriate a reasonable amount of any milk or milk product in the possession or in the control of such licensee for the purpose of use as samples and for inspection or test; and they shall also have the right to enter upon or into the premises of any person or persons from which such licensee obtains his milk for sale to inspect and examine the dairy and dairy herd of such person or persons and each licensee under the terms hereof shall give notice in writing to the Health Officer of any intention on his part to obtain his milk from any other persons than those named in the original application, and any failure on his part so to do or any refusal on the part of said licensee or on the part of said person or persons from whom said licensee obtains his milk to allow such entry or inspection as may be required under the terms of this ordinance shall follow an immediate revocation of the license of such person or persons by the Health Officer.

SEC. 13. It shall be the duty of the Health Officer to cause the dairy or dairy herd of all licensees hereunder and the dairies and dairy herds of the person or persons from whom such licensees obtain their milk to be inspected from time to time and if the conditions which are required as prerequisite to obtaining a license under the provisions of this ordinance are not constantly maintained, then it shall be the duty of the Health Officer to immediately revoke such license. It is hereby made the duty of the Health Officer to enforce the provisions hereof.

SEC. 14. Any person violating any of the provisions of this ordinance shall, upon conviction thereof, be punished by a fine of not less than \$25.00 nor more than \$100.00 or by imprisonment for not less than ten nor more than ninety days, or both, and by the revocation of any license which may have been granted to such persons under the terms of this ordinance,

such revocation to be immediately made by the Health Officer of the City of Miami.

SEC. 15. The Board of Health of the City of Miami shall have authority under this ordinance to make or cause to be made, rules and regulations not set forth in this ordinance, for the proper production, handling and disposition of milk offered for sale within the City of Miami.

SEC. 16. All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

SEC. 17. This ordinance shall take effect and be in force from and after its final passage, approved by the Mayor and publication in a newspaper as required by the law.

Passed and adopted this 7th day of May, 1914.

Rules and Regulations for the Production and Handling of
Milk for Sale and Distribution Within the City of Miami.

Production and
Handling of Milk
in Miami.

1. The herd shall be examined frequently by the Veterinarian of the Board of Health.

Cows.

2. New animals shall not be admitted to the herd without first having passed a satisfactory tuberculin test, which test shall be applied by the Veterinarian of the Board of Health.

3. Any animals found to be suffering with any contagious, infectious or communicable disease or any objectional condition, Mammitis, or Garget, Gastro-Enteritis, Diarrhoea, Puerperal Sepsis, Septic Metritis, Leucorrhoea, Diffuse Phlegmon, Suppurative Wounds or Ulcerations or from any Septic or Febrile condition shall be removed from the herd and their milk excluded.

4. Cows which are within fifteen days of calving shall be excluded from the dairy herd and milk from such cows shall be excluded for said period and until five days after calving.

5. Cows must not at any time be subject to abuse of any kind.

6. Cows shall not be fed any strongly flavored foods.

7. Salt shall be accessible at all times.

8. Cows shall be supplied with an abundance of pure, fresh drinking water.

Stables, Barns,
Milking Sheds,
Barnyards,
Feeding Lots,
Corrals and
Pastures.

1. Stables, barns and milking sheds should have a well-drained location and be free from contaminating surroundings and so constructed as to be easily kept clean.

2. Floors should be tight, sound and incapable of absorbing moisture to any appreciable extent (concrete construction being preferable) and provided with a gutter behind the cows large enough to hold the droppings.

3. Stables, barns and milking sheds shall be provided with stanchions.

4. Feed mangers or troughs shall be of simple construction, smooth and tight so as to be easily cleaned and kept in a sanitary condition. A concrete trough with rounded seams or a smooth floor is best.

5. Barnyards, feeding lots, corrals and pastures to which cows have access shall be free from swamps or stagnant pools and they shall be well-drained and free from contaminating surroundings.

6. No animal other than those used for milk production shall have access to or be kept in stables, barns, milking sheds, barnyards, feeding lots or corrals.

Milk Room or
Dairy Building.

1. A milk room or dairy building shall be provided which shall be located at a reasonable distance and isolated from the stable, barn or milking shed or dwelling and there shall be no hog pen, privy or manure pile within 300 feet of it.

2. The milk room or dairy building shall be equipped with facilities for the proper handling, bottling or storing of milk and the cleaning and storing of utensils and bottles or other containers. And it shall be used for no other purpose than the straining, cooling, handling, bottling and storing of milk and the cleaning of bottles and other containers and the cleaning and storing of utensils. (If possible the handling of milk and the cleaning and storing of utensils shall be done in separate rooms.) It shall be well lighted and ventilated and well screened and have smooth, tight and well drained floors. The walls and ceilings shall be smooth and tight.

Utensils.

1. Utensils should be made of tin with as few seams as possible. Unavoidable seams should be flushed smooth with

solder. Rusty or battered utensils should not be used. Wire gauze strainers nor strainers which are hard to clean should not be used. A double layer of finely meshed cheese cloth or muslin should be used for straining the milk and several should be supplied for each milking.

2. Small top milk pails or milk pails so constructed as to prevent dirt from falling into the pail while milking should be used. What is known as the "Trueman Covered Milk Pail" is one of the simplest and best covered of pails.

1. Barns, stables or milking sheds should be kept clean. Methods.
The floors should be frequently swept or washed and gutters kept free from manure. The ceilings, if the buildings are ceiled, and sidewalls and joints, brackets, braces, tops of stanchions, partitions and ledges should be kept free from dust and cobwebs. Feed mangers or troughs should be sweet and clean and free from dirt and fermenting food. Buildings should be whitewashed twice each year.

2. Barnyards, feeding lots or corrals should be well drained and kept clean and dry. Manure must be removed at least once daily. If stored it must be at a distance of three hundred feet from the buildings. Where conditions will permit, it should be removed and scattered over the ground or stored in a covered pit.

3. The ideal method is to groom each cow before milking and to wash and dry the udder. Where this cannot be done economically, all visible particles of dirt, mud or manure and all dust shall be removed from the back, sides, tail and udder by brushing, and the udder and sides shall be wiped with a clean, damp cloth before milking. Long hair shall be removed from the region of the udder.

4. Cows shall not be fed dry, dusty hay or fodder just before milking.

5. Cows at the time of milking shall be placed in stanchions.

6. Methods of milking shall be cleanly. Milkers shall wash their hands before milking and shall milk with clean, dry hands.

7. Rubbing the sides and udder of a cow after the milker sits down to milk must be avoided.
8. Moistening the hands with milk is forbidden.
9. The first three or four streams of milk shall not enter the pail but be milked into a separate receptacle and such milk shall not enter into the general supply.
10. Milking shall be done in a quiet, quick, clean and thorough manner.
11. Commence milking at the same hour, morning and evening, and milk the cows in the same order.
12. Milkers and other employees shall wear clean outer garments, which shall be worn at no other time than while milking or handling milk, and they shall be kept in a clean place when not in use.
13. Milkers shall not smoke nor chew tobacco nor use tobacco in any form nor use intoxicating liquors while milking or handling milk.
14. Employees shall keep their fingers away from their nose and mouth and other parts of the body during milking time and no milker shall permit his hands, fingers, lips or tongue to come in contact with milk intended for sale.
15. Milk when drawn shall be immediately removed from the stable or milking shed to the milk room or dairy building and immediately strained and cooled to a temperature of 50 degrees Farenheit, or less; at which temperature it should be kept until delivered.
16. Milk which is bloody, ropy, stringy or unnatural in appearance or odor shall be excluded from supply.
17. After milk has been strained and cooled it should be put in bottles or other containers and covered and from which it should not be removed until delivered.
18. All utensils, bottles and other containers shall be thoroughly cleaned by first rinsing in clean cold water, washed in hot soap or soda solution followed by rinsing in clean, cold water, followed by pouring boiling water over them, or preferably, sterilized with live steam after which they shall be inverted on racks in the milk room.

No person having an inflamed throat or suffering with any infectious or contagious disease, or who is known to be a

typhoid carrier, shall be admitted to the stable or dairy building or be allowed to handle the milk, the milk utensils, or any object that directly or indirectly comes in contact with the milk.

No person who has been exposed at home or elsewhere within thirty days to any infectious or contagious disease shall be allowed in the stable or dairy building or to handle the milk etc., until a physician certifies that it is safe for him to do so.

REPORT OF DR. W. A. MUNSELL,

ASSISTANT VETERINARIAN.

Jacksonville, Fla., January 1, 1915.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I herewith submit a summary report of my work as Assistant Veterinarian for the year 1914, which includes an article on Infectious Anemia or Swamp Fever in Horses and Mules. During the year I have been detailed 76 times upon cases as follows:

Investigation for glanders.....18 times
Certifying cattle for interstate shipment.....16 times
Demonstrate serum treatment for hog cholera.....11 times
Vat construction and dipping.....15 times
Special and miscellaneous cases.....16 times

as shown in tabulated form, together with more or less consultory correspondence on various subjects pertaining to the department work.

Respectfully submitted,

W. A. MUNSELL,

Assistant Veterinarian.

DATA ON GLANDERS CASES

Date	Place	Owner	Number & Animal	Diagnosis	Disposition
Jan. 2	Brownsville	Z. Russ	1 Mule	Pos. Clin.	Condemned
Feb. 9	Jacksonville	Sable Bros.	1 Horse	Pos. Clin.	Condemned
Feb. 10	Jacksonville	Parish Johnson	1 Horse	Neg. Test	
Feb. 11	Starke	H. S. Norman	1 Horse		Dead
Feb. 19	Orlando	J. P. Mathers	2 Mules	Tested	1 Condemned
Feb. 22	Tampa	Am. Laundry Co.	8 Horses	Tested	2 Condemned
Feb. 24	Orlando	W. M. Madrid	1 Horse	Clinical	Condemned
April 3	Glen St. Mary	Jas. Johnson	1 Horse	Neg.	
April 11	Newberry	E. C. Sapp	1 Horse	Neg.	
April 15	Tampa	J. P. Brown	14 Horses	Tested	4 Condemned
June 3	Dade City	Eli Vaughn	1 Horse		Dead
July 15	Sanford	B. I. Leonardy	1 Mule	Clinical	Condemned
Aug. 6	DeLeon Spgs.	Roy Corbett	1 Horse		Dead
Aug. 25	Newberry	Wm. Mears	1 Horse	Neg.	
Sept. 23	Palatka	B. I. Leonardy	1 Horse	Clinical	Condemned
Oct. 3	Old Town	W. B. Finlayson	1 Mule	Neg.	
Oct. 20	Dade City	O. L. Dayton	1 Horse	Neg.	
Dec. 4	Hastings	Dr. Dolan	1 Horse		Dead

CATTLE CERTIFIED FOR INTERSTATE SHIPMENT

Date	Place	No.	Shipper	Consignee	Destination
April 6	Gainesville	1	N. A. Callison	S. M. Davis	Fayetteville, N. C.
May 4-6	Kissimmee	533	Rull Bass	McKibben Bros.	Iantha, Mo.
May 11-12	Kissimmee	469	Henry Bass	Roeliff Chenoveth	Clarkeberg, W. Va.
June 18	Jacksonville	80	Union Stk. Yds.	W. B. King	DePerre, Wis.
June 20	Jacksonville	75	Union Stk. Yds.	Gibson & Bell	Louisville, Ky.
July 8-9	Hastings	240	F. E. Bugbee	Shippey & White	Atlanta, Ga.
July 10	Hastings	57	J. W. White	W. H. Hodges	New Orleans, La.
July 14	Jacksonville	45	Union Stk. Yds.	Wm. Dougherty	Louisville, Ky.
July 29	Jacksonville	35	Union Stk. Yds.		Columbia, S. C.
Aug. 5	Gainesville	1	N. A. Callison	M. Dixon	Ogierfield, Ga.
Aug. 31	Jacksonville	38	Union Stk. Yds.	C. T. Goodwyn	Columbia, S. C.
Sept. 5	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 17	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 22	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Sept. 24	Jacksonville	40	Union Stk. Yds.	J. T. Bland	Columbia, S. C.
Oct. 13	Branford	109	W. E. Braezeal	W. L. Nelson	Charleston, S. C.

DETAIL OF WORK ON HOG CHOLERA

Date	Place	Owner	No. Treated	Amt. Serum Used	Method of Treatment	Agent Appointed
Jan. 7	Gainesville	B. F. Williamson	12	500 cc	Double	
Jan. 10	Kissimmee	J. E. Lupper	25	500 cc	Single	J. E. Lupper
Mar. 4	Leesburg	J. W. Hopson	35	1250 cc	Single	J. W. Hopson
Sept. 7	Ocala	Marion Co. Farm	89	3000 cc	Single	Dr. Dunn
Oct. 3	Old Town	G. C. Chairs	50	2000 cc	Single	
Oct. 14	Live Oak	F. Drew	25	1000 cc	Double	
Nov. 6	Oxford	Gamble Bros.	65	3000 cc	Double	
Dec. 15	Lawtey	J. W. Caldwell	12	250 cc	Double	
Dec. 28	Worthington Spgs.	L. G. Ware	15	500 cc	Double	Z. Mizell
Dec. 29-31	Fort Myers	C. E. Barton	15	500 cc	Double	Dr. H. A. Smith
Dec. 29-31	Fort Myers	Peter Schatt	15	500 cc	Single	Woodrow, Fla.

TICK ERADICATION AND VAT CONSTRUCTION

Date	Place	Owner	Object Demonstrated
Apr. 27	Emporia	L. P. Felt	Prepare dip. sol. and dipping
Apr. 29	Jacksonville	Union Stock Yds.	Prepare dip. sol. and dipping
May 2	Kissimmee	Rull Bass	Prepare dip. sol. and dipped
May 23	Jacksonville	Union Stock Yds.	Prepare dip. sol. and dipped
May 26	Jacksonville	Union Stock Yds.	Dipping for shipment
June 16	Jacksonville	Union Stock Yds.	Dipping for shipment
July 3	Hastings	F. E. Bugbee	Prepared Sol. and dipped for shipment
Aug. 11	Pierson	Harper & Minshew	Vat Construction
Aug. 17	Rodman	Rodman Lbr. Co.	Vat Construction
Aug. 18	Pierson	Harper & Minshew	Prepared dipping solution
Aug. 19	Highland	F. D. Long	Vat Construction
Aug. 28	Jacksonville	Union Stock Yds.	Prepared dip. sol. and tested
Sep. 4	Jacksonville	Union Stock Yds.	Prepared dip. sol. and tested
Sep. 19	Highland	F. D. Long	Prepared dip. sol. and tested
Oct. 6	Zolfo	Roberts & Wadsworth	Vat Construction

SPECIAL CASES

Date	Place	Owner	Sub. Investigated	Diagnosis
Jan 5	Cocoa	R. W. Lewis	Requirement for shipping to Pa.	
Mar. 6	Mattox	I. S. Morgan	Sick dairy cows	Tick fever
Mar. 10	Gainesville		Certify horse for shipping to N. C.	
Mar. 25	Boynton	Boynton Hotel	Tuberculosis test dairy, three cows	Negative
Apr. 6	Ocala	Ocala Stk. Farm	Sick calves	Tick fever
June 12	Dukes		Sick cows	Tick fever
June 22-24	Daytona	Board of Trade	Inspect dairies supplying milk	
July 25	Palatka	Tom Waldron	Sick hogs	Lung worm and cholera
Aug. 4	Gainesville	N. A. Callison	Tuberculin test calf for shipment to Ga.	Negative
Sep. 2	Hawthorn	W. S. Moore	Tuberculin test family cow	Negative
Sep. 4	Palatka	F. J. Fearnside	Sick hogs	Cholera
Sep. 23-27	Key West	V. Cordero	Inspect and certify imported horse from Cuba	Admitted
Oct. 2	Kissimmee	Dr. Richmond	Sick cow	Tick fever and indigestion
Oct. 15	Live Oak	F. Drew	Sick pigs	Food poison
Nov. 12	Ocala	J. Robinson	Sick hogs	Cholera
Dec. 24	Fort White		Sick cattle	Forage poison

Infectious
Anemia, or
Swamp Fever in
Horses and
Mules

Infectious anemia, otherwise known as Swamp Fever, Staggers, Kidney Disease, Sanded and Surra, is an infectious disease of horses and mules which occurs not only in Florida, but in many other, possibly all States of the Union. It is characterized by a progressive, pernicious anemia, with marked emaciation and weakness, and by frequent urination and intermittent fever. It not only prevails in low, marshy lands, but also in high lands which abound in ponds and marshes. It makes its appearance during wet seasons, and occurs in three forms, the acute, subacute and chronic. It can be transmitted experimentally from sick to healthy animals by the subcutaneous inoculation of blood serum that has been filtered through the finest filters, which proves it to be caused by a virus that is not visible under the highest-powered microscope, and that the virus belongs to the same class as those causing hog cholera, and foot and mouth disease.

The natural mode of infection is, no doubt, through the digestive tract, from infected drinking water, pastures or feed-lots. It is also probable that the virus may be spread by flies and other biting insects.

In uncomplicated cases the disease runs a chronic course, lasting from two months to a year, during which time the animal emaciates greatly and seems to die of starvation, although the appetite remains good, and the best of food is supplied.

These begin with a dull, listless appearance, lack of ambition and general weakness, particularly in the hind parts, which manifests itself by a staggering gait. The animal easily tires, and there is increased respiration upon the slightest exertion. The pulse is increased, weak, irregular and intermittent. The temperature may rise to 105, and remain there for several days, drop again, and rise again, at irregular intervals. This characteristic fever may be overlooked by the owner, or even the veterinarian, under the circumstances surrounding practice in rural districts. At times when the fever is absent, the animal has a voracious appetite, and seems to be recovering. A relapse soon occurs, however, prominent symptoms which impress themselves upon the owner are, frequent urination, thirst, stocking of the legs, sheath, belly and lower lips. The conjunctival membranes and haw are pale, sometimes of a yellowish tinge, and may show enlargement of the blood vessels. The mucous membranes of the mouth and nose are pale yellow. Microscopic examination of the blood will reveal a great diminution in the number of red cells, as indicated also by an unusually small blood clot which forms in the blood, drawn. There is a more or less constant mucous discharge from the eyes, which runs down the face, and the eyes have a sunken appearance. Symptoms

This is easily made from the general symptoms such as, the insidious onset, remittent fever, progressive emaciation and anemia, the unimpaired and even ravenous appetite, the staggering, uncertain gait, the general weakness, frequent urination and more or less tenderness in the region of the loins and the stages of apparent improvement, and relapse. These make up a train of symptoms which are not present in other infectious diseases in horses and mules, and when viewed as a whole, the diagnosis is not difficult. Diagnosis

Only results may be expected from treatment when the case is seen early and prompt treatment is instituted and applied Treatment

persistently. Generally, treatment has not been satisfactory. The arsenic, quinine, iron and silver preparations have been tried, with varying success. As in the case of all other infectious diseases, the healthy animals should be separated from the sick ones and the premises should be thoroughly disinfected with a 5 to 8 per cent. solution of any of the coal-tar preparations, or with a five per cent. solution of carbolic acid. Change of pasture is highly advisable, as well as a change of drinking water.

The Bureau of Animal Industry advises the following arsenical tonic:

Arsenious acid, two grams; powdered nux vomica, twenty-eight grams; powdered cinchona bark, eighty-five grams; powdered gentian root, one hundred grams. Mix these and give half a tablespoonful at each feeding of the animal.

REPORT OF DR. J. W. DE MILLY,

ASSISTANT VETERINARIAN.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—Please find enclosed my report of service during year 1914, subject to your approval for the annual report of the State Board of Health.

Yours very truly,

J. W. DEMILLY,

Assistant Veterinarian.

On April 1st, left Tallahassee for Marianna to investigate supposed case of glanders for Mr. A. E. Michner, Lenath Lenard Agt. The ophthalmic mallein test was applied on the afternoon of April 1st and the result of the test observed on the morning of April 2nd was negative.

On April 3rd, inoculated for Mickler & Perkins 37 hogs, using 880 cc of serum.

In addition to the above report, during the month of April 1st collected and forwarded to the office, cattle ticks for experimental work.

On May 5th, was detailed to Gainesville to confer with Mr. Stafford Burgis regarding hog cholera. Demonstrated our method of administering hog cholera serum by inoculating at Archer, May 7th, 17 hogs for Mr. C. E. Pearson, using 410 cc of serum; also 10 hogs for Mr. John Acres, using 260 cc of serum.

From Gainesville was detailed to Leesburg to confer with Mr. W. R. Newell, in regard to hog cholera. May 8th, I inoculated his herd of 56 hogs, using 1485 cc of serum. I also instructed Mr. Newell and appointed him agent for his immediate neighborhood.

From Leesburg, I returned to Jacksonville and from there went to Macclenny to confer with Mr. C. F. Barber regarding vat construction.

May 14, applied the ophthalmic mallein test to one horse, property of Judge J. B. Whitfield, of Tallahassee. Result on May 15, negative.

During the month of May, I caught and forwarded to the office a number of buzzards for hog cholera experimental work; also met with the City Council of Tallahassee regarding the passage of a city ordinance regulating the care of manure on premises to curtail the breeding places of flies.

On May 27, there was held at Tallahassee a barbecue, on which occasion I was instrumental in getting Dr. C. F. Dawson to deliver an address (illustrated) on tick eradication.

June 1st, visited the vicinity of Chaires. Inoculated the herd of hogs belonging to Mr. J. W. Dutton, instructed and appointed him agent for that territory.

June 11th, was detailed to Ona to supervise construction of vat for Mr. R. L. Cowart. While there, conferred with Mr. Joseph Crews regarding construction of other vats in that section. Returned to Tallahassee June 17.

June 30, was called to Jacksonville to see a galvanized iron vat built by the E. O. Painter Co. and to confer with Dr. Dawson regarding installation of same.

July 5 to 7, inclusive, was at Marianna, applying the tuberculin test to the herd of cattle belonging to the Florida State Industrial School. Offered some suggestions as to the milking and care of milk.

July 15th, was detailed to Rodman to install galvanized iron vat for the Rodman Lumber Co. Same not being satisfactory, I returned to Rodman, July 28th, to supervise construction of concrete vat. Concrete work was completed August 3rd. (July 27, inoculated herd of 30 hogs, using 760 cc of serum, for Mr. E. M. Russell, Tallahassee.)

August 15 was detailed to Wauchula to construct vat for Mr. Jos. Crews. Concrete work was finished August 20th.

On September 1st, was detailed to Highland to construct vat for Mr. F. D. Land. Concrete work was completed September 4th.

On September 8, was detailed to Greenville to investigate supposed case of glanders. Result, negative.

September 13 was detailed to Macclenny to construct vat for Mr. C. F. Barber. Concrete work was completed September 17.

September 29, was detailed to Branford to supervise shipment of cattle. Owner not willing to ship according to my instructions from the office, so returned to Tallahassee October 1st.

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